PRINTING EQUIPMENT

• A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

Some who read these lines will remember him—others will place him through tradition. He is a fixed character in the American background, the *itinerent compositor*.

Long before typesetting machines ever clicked he would stroll into the printing office from somewhere back East, and after an interview with the proprietor would take his place at the case. He might stay a few weeks or a few months, but he seldom took root. The glow of the Western horizon lured him onward. One morning he would be missing, and the shop struggled on with the fragments of knowledge he left behind.

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We believe this Reference Issue will be more important to plant executives this year than ever before. A recent survey made by us (Section II of which is published in this issue) shows an unprecedented need for all kinds of printing equipment and supplies in the immediate postwar era.

Manufacturers are using generous space in the "WHERE TO BUY" Issue to tell you about these products. This, coupled with our Departmentalized Indexes of printing equipment manufacturers' names as well as trade names, prepared by our equipment-minded editorial staff, will be an accurate reference source for the buying executive. This year too, we are inserting product inquiry cards to make it easy for executive-buyers to get complete information on all advertisers' products.

NOTE TO MANUFACTURERS

If you have not yet reserved space in this important Printing Industry Buying Guide, please do so at once. We will be glad to send you complete information about rates, positions, etc., upon request. Please remember that the users of this "WHERE TO BUY" Reference Issue want complete information on your products. The closing date is November 15.

PRINTING EQUIPMENT *Engineer*

1276 West Third St. Cleveland 13, Ohio

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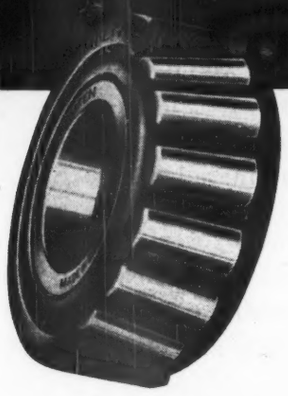

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PRINTING EQUIPMENT *Engineer*

Volume 69 Number 1

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

MacD. SINCLAIR
Editor

ADAM HENRI REISER
Associate Editor

HERMAN SLATER
Associate Editor

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OCTOBER, 1944

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STANDARD BOOK ON ESTIMATING for PRINTERS—By Fred W. Hoch. Revised 1941 edition. This book is a primer for students and a reference for printers and estimators. Every printing plant should have a copy. Author explains all operations in commercial printing plant and shows production time allowance for each in hours and decimal hours. Size, 6 in. by 9¼ in., 268 pages, $3.75 per copy, cash with order.

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HOW TO ADJUST WORK-UPS—By Wm. H. Lichter and Geo. F. Smalley. Booklet consists of 24 pages in which are analyzed and remedies are given for prevention and/or elimination of workups. Material written as result of actual plant experience. Size, 5¼ in. by 7¼ in. Price, $1 per copy, cash with order.

HANDBOOK FOR PRESSMEN—By Fred W. Hoch. Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts, $3 per copy, cash with order.

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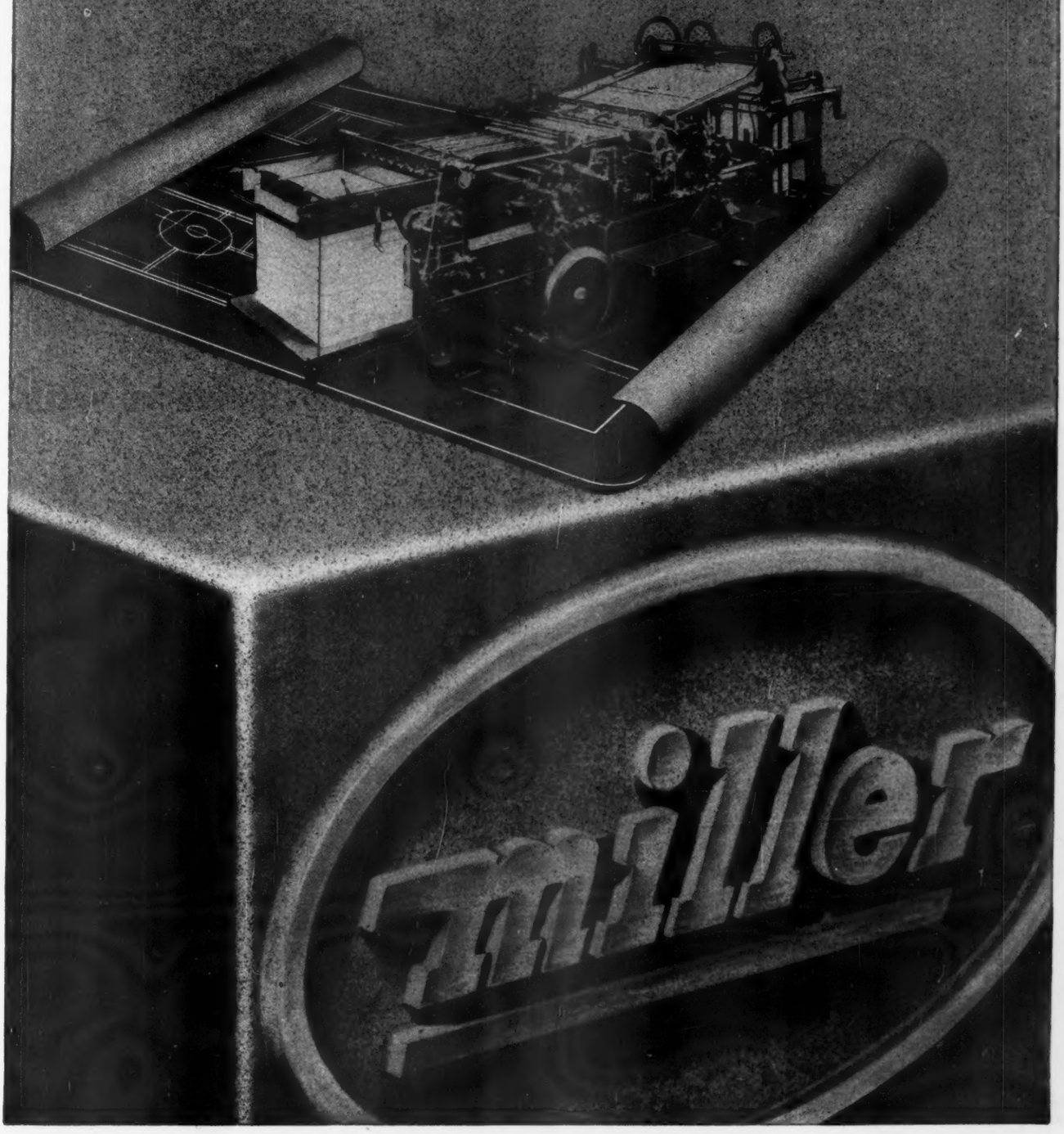
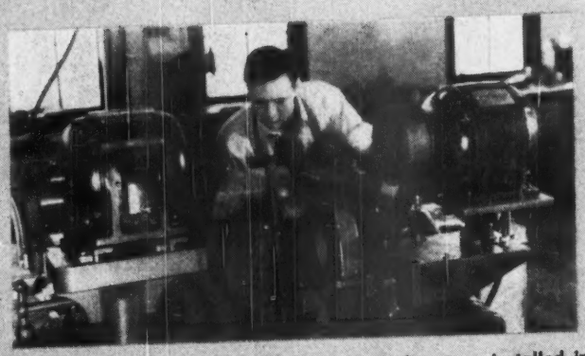


SHORTS STYMIED

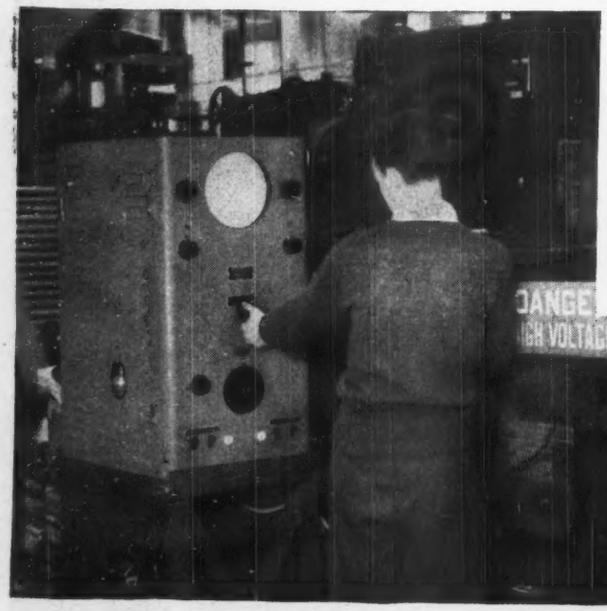
Voltage surges which accompany switching and frequent starting and stopping of motors impose high dielectric stresses on the coil insulation, and can cause harmful short circuits. Yet this is an unavoidable condition of service for many motors.

The grinder shown here, for example, starts and stops every time a finished part is removed and a new part inserted. But the two Tri-Clad motors that drive it have been built to withstand safely the voltage surges ordinarily encountered in this type of service. Their ability to "stymie" shorts was proved by *the new General Electric test* described below.

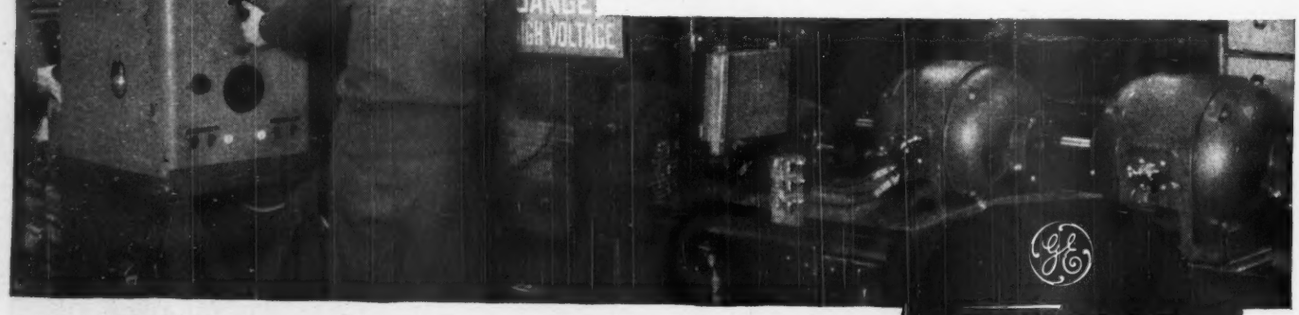


External grinder, equipped with two Tri-Clad motors, installed in the milk-machinery manufacturing plant of the Rite-Way Products Company, Chicago, Ill.

New high-potential, electronic surge-tester verifies strength of TRI/CLAD motor windings



This electronic test of insulation makes a "cardiogram" of every Tri-Clad motor winding, ferreting out weaknesses that might lead to shorts caused by voltage surges in service. It tests each turn, coil, and phase group of the windings for adequate insulation strength to withstand the "steep front" high-voltage surges of actual service. First developed and applied by G.E., it's one of the production tests which all Tri-Clad motors must pass as they come off our production lines. – *General Electric Company, Schenectady, N. Y.*



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TRI CLAD MOTORS

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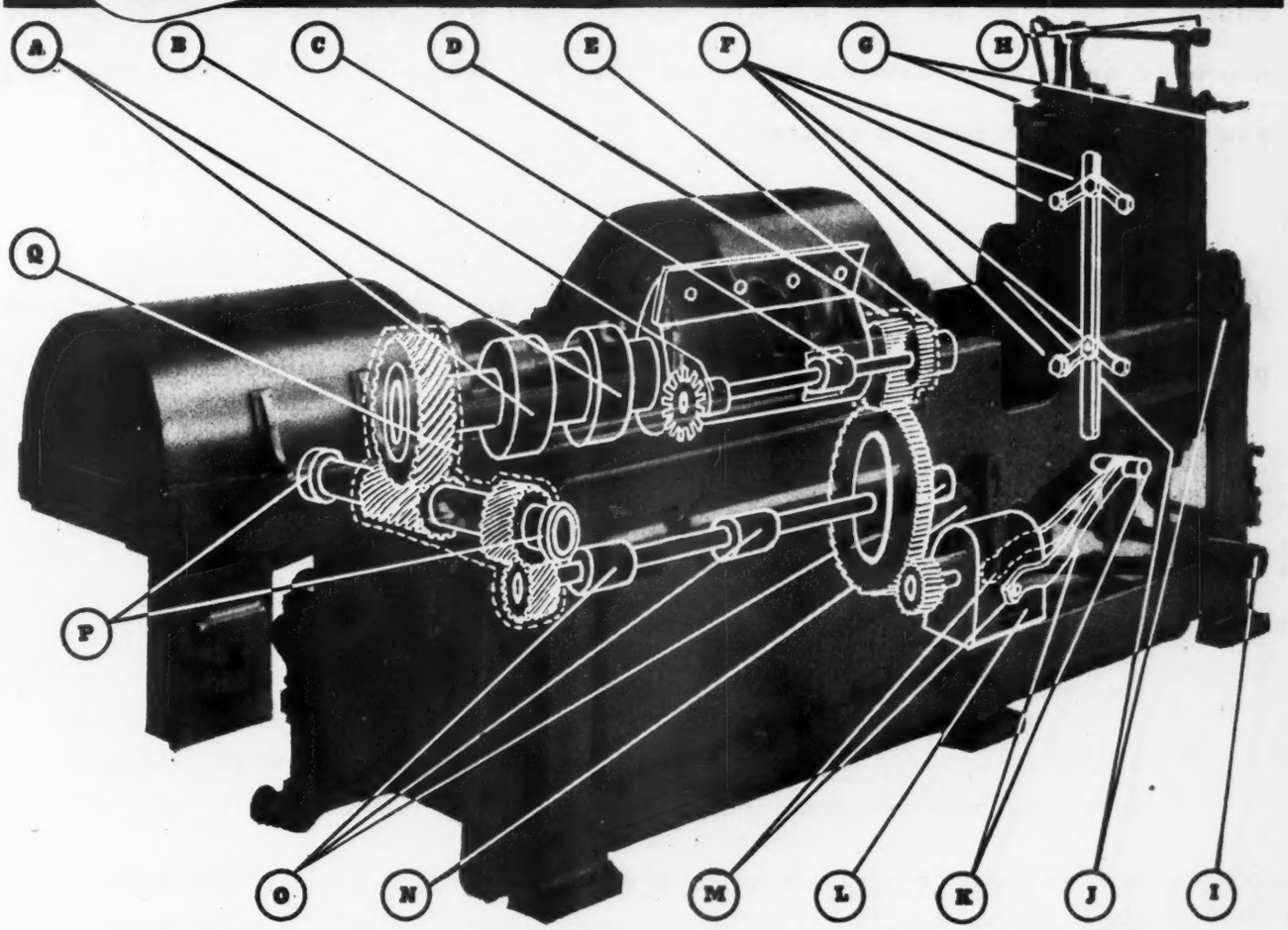
LUBRICATION *of* PONY AUTOPLATE



Most effective of all maintenance precautions is, of course, thorough lubrication. This diagram of the Pony Autoplate shows the points which should be lubricated regularly. "Q", the gear case, should be packed with 600 W or other good worm and gear grease . . . all other points lubricated with SAE 20 or SAE 30 grade oil.

A—Shaving-knife bar bearings
B—Cutting-saw spindle (cooling stand end)
C—Cutting-saw spindle (casting-box end)
D—End of shaving-knife bar
E—Shaving-knife bar bearing
F—Core locking-links and studs
G—Pouring-sheet handle
H—Pouring-sheet pivot brackets
I—Casting-box operating treadle
J—Core supporting-bracket rolls
K—Core turning-links (Casting-box end)
L—Motor
M—Core turning-links (Frame end)
N—Starting lever (not shown)
O—Saw Driving shaft bearings
P—Drive shaft bearings
Q—Driving worm and driving-worm gear case

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1. The first successful flatbed web press, patent No. 459813 (applic. October 16, 1890); first press installed at the Rutland, Vermont, Herald in 1890.

2. The unit-type heavy-duty press, patent No. 814510 (applic. July 26, 1905); first installation made in 1906 at the New York Journal of Commerce.

3. The revolutionary Tubular press, patent No. 867230 (applic, August 22. 1906); initial installation went to Kalamazoo, Michigan Press in 1909.

4. The Unitubular press, patent No. 2104737 (applic. June 4, 1934); first one of these went into the plant of the Salem, Oregon, Capital Journal in the same year.

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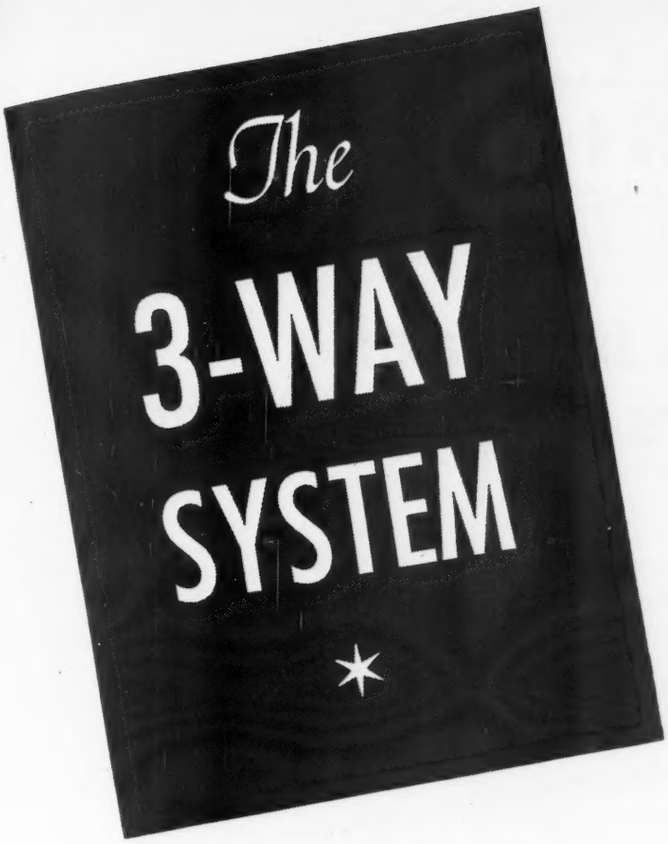

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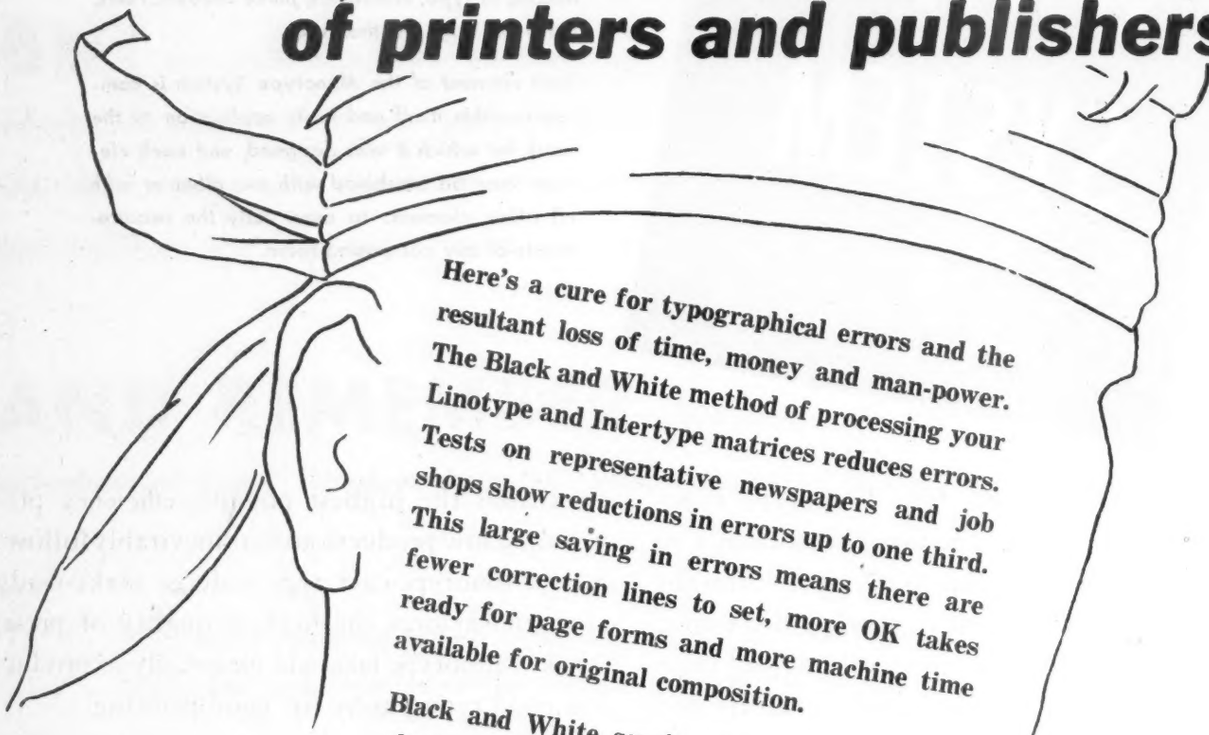
the headache of printers and publishers



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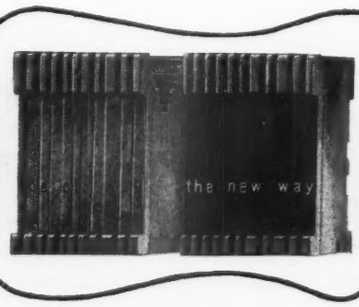


L-226

Printing Trades Machinery and Parts Limitation Order has been amended — Certification of parts scrapping eliminated — Restrictions on manufacture of parts changed — Control over manufacture of printing equipment retained

PRINTING'S production and mechanical executives may now heave a sigh of relief. There's one thing less to do with respect to the war effort. WPB says its no longer necessary to certify as to the disposal of scrapped parts when ordering new repair machine parts from the manufacturer or dealer. This stipulation which formed a part of the original L-226 Machinery and Parts Order has been omitted from the amended version issued on October 2. However, cautions WPB, manufacturers may still require the certification as outlined in Controlled Materials Plan No. 5 under Maintenance, Repair and Operating Supplies.

Operating Supplies Are Now Considered "Parts"

Items previously produced as operating supplies are now considered to be "parts" and may be manufactured in quantities up to 150% of 1941 sales dollar value.

Mechanical and production executives should not become too jubilant by feeling that the "lid is off" entirely on machine parts manufacture. However, it seems that in phrasing the statement as contained in the revised order, WPB realizes existing printing equipment is growing older daily; because new equipment has not been manufactured for a long time, it is necessary for printing plants to keep their machines in good operating condition by applying new parts. This situation no doubt has accelerated the demand for machine repair parts. Another factor which may have a bearing on the repair parts situation, we surmise, is that while the manufacturer is permitted to make up to 150% of the sales value of the parts he made in 1941, yet he may have some difficulty in obtaining materials (some of which are and will be critical for some time to come) from which to manufacture the parts.

Not Necessary to Fill Out Form 1319 For $200 or Less Equipment

Another revised provision of Amended Order L-226 is that Form WPB-1319 applications need no longer be filed for permission to purchase a single item of equipment costing $200 or less. The term "single item of machinery" means any machine or group of items customarily purchased together.

It is still necessary, however, to secure WPB approval for the purchase of equipment, the value of which exceeds $200. The application for approval to purchase must be made on Form WPB-1319, or Form GA-1456, *in quadruplicate*.

Used Machinery Regulations Eliminated

The purchase of used Graphic Arts machinery, regardless of age, need not be cleared on Form WPB-1319, nor special sales as defined in Priority Regulation No. 13.

Manufacturers' Appeals Eliminated

Manufacturers are no longer required to use appeals procedure, but may apply by letter to WPB at Washington, D. C., for authorization to manufacture machinery in each quarter. Critical materials will continue to be allotted by CMP-4B applications.

Manufacture of Equipment Still Under Control

Mechanical and production executives of printing plants should note that while WPB has relaxed Order L-226, yet at the same time the manufacture of printing equipment still is under control of WPB. In considering manufacturers' applications, the War Production Board will be guided by the policy that the total production of the entire equipment manufacturing industry must not exceed the allocated amount of material available for the manufacture of printing trades machinery. The increased or resumed production in any one plant, or the labor requirements necessary, must not interfere with war production in that plant or with local or inter-regional labor recruiting efforts.

Text of L-226 as Amended

Following is complete text of Limitation Order L-226, as amended October 2, 1944:

PRINTING TRADES MACHINERY AND PARTS

Section 3133.1, Limitation Order L-226 is hereby amended to read as follows:

§ 3133.1 **Limitation Order L-226**—(a) **What this order does.** This order restricts the production of printing trades machinery and parts, and restricts the delivery of new printing trades machinery.

(b) **Definitions.** For the purpose of this order:

(1) "Printing trades machinery" means the kinds of machinery or equipment which are listed in Schedule A. It does not include such machinery which is covered by the following orders: Office machinery covered by Limitation Order L-54-c; paper mill machinery covered by Limitation Order L-83; photographic equipment and accessories covered by Limitation Order L-267; container machinery covered by Limitation Order L-332.

(2) "Parts" means replacement parts for repairing, maintaining or rebuilding printing-trades machinery. It does not include spare parts for new equipment when ordered by the United States Armed Forces for delivery with such equipment.

(c) **Restrictions on production of printing trades machinery.** No person may produce any printing trades machinery except:

(1) For delivery to the United States Armed Forces or to the Veterans Administration upon orders approved in accordance with paragraph (g), or

(2) As authorized by the War Production Board on Form GA-1850.

(d) **How to obtain authorization on Form GA-1850.** (1) A person wishing to produce printing trades machinery, other than to fill approved orders for the United States Armed Forces or the Veterans Administration, should apply for authorization by letter addressed to the War Production Board, Printing and Publishing Division, Washington 25, D. C., Reference L-226. The minimum information required in this letter is

(i) Kind of machine
(ii) Style or model and size of machine
(iii) Quantity of each style or model and size
(iv) Number and kind of component parts required
(v) Number of months required to complete proposed production

(2) Where the applicant will need controlled materials in order to produce the machinery, the letter requesting authorization should be accompanied by application on Form CMP-4B for the controlled materials.

Amended Order L-226 Result of Collective Thinking

It is apparent the context of Limitation Order L-226 issued by the War Production Board on October 2 is the result of much effort devoted to simplifying the order by the four equipment manufacturers' advisory committees working in cooperation with the parent Printing and Publishing Division of WPB. The personnel of these committees were announced by WPB and published in recent issues of *Printing Equipment Engineer*.

These four printing industry equipment manufacturers' advisory committees are Composing and Typesetting, Printing and Litho Platemaking, Printing Press, and Printers' Bindery.

Thus it will be seen that in view of the cooperative policy of WPB with industry, by working through advisory committees, that the order as published below in full represents the thinking of these committees jointly with the Printing and Publishing Division.

(3) Where the applicant seeks to increase or resume production of printing trades machinery, the letter requesting authorization should be accompanied by Form WPB-3820 (four copies), with answers to section II.

(e) **Policy for authorizing production on Form GA-1850.** In authorizing production on Form GA-1850 and in processing applications on Form CMP-4B, the War Production Board will be guided by the policy that the total production of the entire industry must not exceed the approved War Production Board program for printing trades machinery, and that increased or resumed production in any one plant, or labor requirements therefor, must not interfere with war production in that plant or with local or inter-regional labor recruiting efforts. Production of printing trades machinery which was specifically authorized by the War Production Board through the granting of appeals before October 2, 1944 may be completed after that date, but such production will be taken into account in authorizations to be made on Form GA-1850 in order that total production will not exceed the approved War Production Board program.

(f) **Restrictions on production of parts.** In the twelve-month period commencing October 1, 1944, no person may produce parts in a quantity having a sales value in excess of 150 percent of his 1941 sales of all parts.

(g) **Restrictions on delivery of new printing trades machinery.** Except as provided in paragraph (h), no person may deliver or accept delivery of any new printing trades machinery without first obtaining approval on Form WPB-1319 on Form GA-1456. Form WPB-1319 should be filed in quadruplicate with the War Production Board, Printing and Publishing Division, Washington 25, D. C. in accordance

with the instructions accompanying the form. For applications involving building construction under Limitation Order L-41, approval on Form GA-1456 must be obtained by filing Form WPB-617 in accordance with the instructions for that form.

(h) **Exceptions to delivery restrictions.** The restrictions contained in paragraph (g) do not apply to:

(1) The delivery of new printing trades machinery to anyone who is acquiring it only for resale within the continental United States (48 States and the District of Columbia), but the person who receives such machinery may deliver it for use only upon an approved order under paragraph (g).

(2) The delivery of any single item of new machinery having a sales value of $200.00 or less. The term "single item of machinery" means any machine or group of items customarily purchased together.

(3) The delivery or acquisition of printing trades machinery pursuant to Priorities Regulation 13.

(i) **Applicability of regulations.** This order and all transactions affected by it are subject to all present and future regulations of the War Production Board.

(j) **Exceptions and appeals—(1) Production under Priorities Regulation 25.** Any person who wants to produce printing trades machinery other than as provided by paragraph (e), and any person who wants to produce more parts than his quota as fixed in paragraph (f), including any person who has no quota, may apply for permission to do so as explained in Priorities Regulation 25.

(2) **Delivery under Priorities Regulation 24.** Any person who wants to accept delivery of any printing trades machinery other than as provided in paragraph (g) may apply for permission to do so as explained in Priorities Regulation 24.

(3) **Appeals.** Any appeal from the provisions of this order other than the restrictions of paragraphs (e), (f) and (g) shall be filed on Form WPB-1477 with the Printing and Publishing Division, War Production Board, Washington 25, D. C. Ref: Order L-226.

(k) **Communications.** All communications concerning this order shall, unless otherwise directed, be addressed to: War Production Board, Printing and Publishing Division, Washington 25, D. C., Ref: L-226.

Issued this 2d day of October 1944.

War Production Board,
By J. JOSEPH WHELAN,
Recording Secretary.

SCHEDULE A

Machine and Hand-Composing Room Equipment

Automatic metal feeders.
Composing room band saws.
Rule form broaching machines.
Composing Room saws and saw trimmers.
Line typesetting machines.
Lino-saws.
Material makers.
Remelt furnaces and molds.
Lead and rule casters.
Space band cleaners.
Single character type composing machines.
Single character type casting machines.
Type and galley cabinets.
Composing and imposing tables.
Power miltering machines.
Supersurfacers.
Shell-high slug shears.
Slug profilers.

Plate-Making Equipment (Photoengraving, Lithographic, Electrotype, Stereotype, Rubber and Plastic Plate Making)

Arc lamps.
Ben day machines.
Cameras designed for use in printing-trades.
Etching machines.
Halftone screens.
Monel silver baths.
Monel evaporating dishes.
Plate mounting nailing machines.
Planing machines.
Plate coating machines (whirlers).
Plate graining machines.
Plate routers.
Plate beveler and trimmers.
Projectors.
Photo-composing machines.
Vacuum backs for cameras.
Vacuum printing frames.
Diaphragm controls.
Casting boxes.
  Vacuum backs.
  Automatic plate casting machines.
  Flat and curved hand casting boxes.
Cooling tables.
Mat formers.
Mat scorchers.
Mat rollers.
Molding presses.
Plate curving machines.
Plate depth gauges.
Saws and trimmers:
  Circular saws.
  Cutters or trimmers.
  Combination saws and trimmers.
Roll film cutters.
Shaving machines.
Tail cutters or trimmers.
Temperature control units.
Matrix shears.

Pressroom Equipment

Automatic press feeders and deliveries.
Bronzing machines.
Cutting and creasing presses.
Hand and automatic sheet and web-fed platen presses.
Hand and automatic fed plate engraving presses.
Hand and automatic fed flat-bed cylinder presses.
Paper seasoners.
Proof presses.
Scoring and perforating attachments.
Sheet and web-fed rotary letterpresses.
Sheet and web-fed offset presses.
Sheet and web-fed rotary gravure presses.
Thermographic presses.
Transfer presses.
Varnishing machines.
Web-pasters.
Web-tension devices.
Sheet and web-fed aniline-ink presses.
Web feeding reels.

Bindery Equipment

Automatic feeders for folding machines, board cutters and ruling machines.
Automatic and hand-fed power trimmers.
Banding machines.
Bindery hand presses.
Binder's board cutters.
Binder's cloth cutters.
Book presses, standing (drying, clamp units, power or hand).
Case making machines.
Casing-in machines.
Cover shaping and bending machines.
Lining-up and headbanding machines.
Gathering and collating machines.
Inserting machines.
Stitcher-feeders.
Jogging machines.
Mechanical binding machines.
Nipping machines.
Paper ruling machines, pen and disc type
Paging and numbering machines.
Perfect binding machines.
Perforating machines.
Pamphlet covering machines.
Round cornering machines.
Paper punching machines.
Paper drilling machines.
Paper indexing machines.
Rounding and backing machines.
Round corner turn-in machines.
Stripping machines.
Smashing machines.
Stamping and embossing machines.
Signature bundling presses (hand and power).
Thread sewing machines.
Thread stitching machines, hand and automatic feed.
Tipping and end paper machines.
Book and book back gluing machines.
Book and pamphlet wire-stitching machines.
Rotary gathering tables.
Book and magazine wrapping machines.
Guillotine cutting machines, power and hand lever.
Hand and automatic fed folding machines.

Production on the V-45 Vertical

By HERMAN A. SLATER

IN response to many requests for information on the production of the V-45 Vertical, this writer after considerable investigation has compiled some facts and figures to assist in everyday operation of this particular printing machine.

Production figures mean little unless they are applied to the specific job after considering the class of work, stock thickness, square inches in form, condition of machine, length of run, supplies, etc. Averages and outstanding records are of little or no value as explained in the following discussion:

The highest production attained in any one shop has very little value. Such figures only show what can be done under nearly perfect conditions. New electros, very ordinary class of work, premakeready in the composing room or a job following one of the same size must be taken into consideration in compiling production figures. Furthermore, the pressman may have been one of exceptional ability. Production figures based on such factors do not furnish a sound basis for expected production on the large majority of jobs.

The quality of war time paper should also be considered. Variations in weights, caliper, coatings and sizes have made it practically impossible to establish definite standards in many plants on press production for the duration. A few plants have set-up standards for the V-45 Vertical which on some occasions are beaten. However, in a few instances an indirect excess-allowance is made. This charge is permitted on the estimate sheet because past experience has proven this should be done in individual cases.

The psychological effects on the human element in these critical times has an important bearing in deficient press production. Furthermore, the quality of available labor in the Graphic Arts industries has dropped 40% in the past two years. Reports from several sources have indicated that makeready and running-time is governed by the condition of forms and machines as well as the human element. However, it was pointed out that the versatility of the Vertical press for most run-of-the-hook work should in some instances justify an added charge in indirect-labor due to the fact a savings is made in unnecessary, seldom-used, printing presses.

We have examined production estimates from various sources. In all this, we have found nothing by which to estimate reasonable production expectancy that was better than *PAR for Printers*. This is a work in which the authors set up production standards covering both makeready and running for various classes of jobs ranging from "ordinary" through "medium, good, superior, and troublesome." We have checked these standards ourselves and through many shops. They have stood up well—of course, they are not perfect.

The classification of the individual job involves the nature of the forms and the kind of paper.

The makeready time involves the job classification and the square inches in the form.

The running time involves the job classification and the stock thickness.

From your knowledge of the factors involved, you will see that this is built on a correct foundation.

Now, on the V-45 Vertical, a maximum size form of ordinary (cheap) work would require .8 hour makeready and the running production on normal thickness stock (0.003 in. to 0.0055 in.) would be .29 hour per thousand (3,487 per hour). For a 10,000 run, this would require 3.7 hrs. for makeready and running, but for other classes of work this would be greater. To illustrate this, let us compare the estimated production for different classes of work. In all cases, we will consider a maximum size form on a stock from 0.003 in. to 0.0055 in. thick.

(*Continued on Page 42*)

EMPLOYMENT
AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions. Any reasonable request by an executive on a subject other than those listed will be granted cheerfully.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

HELP WANTED MALE—Combination press and stereotype. Union shop. Steady position. Good working conditions. Reply Box 213.

PRESSMAN-STEREOTYPER—Wants position. Scott, Goss and Hoe equipment. Nineteen years' experience. Union. Ohio or Indiana preferred. Reply Box 212.

Sound Movie Available

The Miehle Printing Press & Mfg. Co., 14th St. and South Damen Ave., Chicago 8, Ill., announces it has available a sound movie in which is shown the operation and mechanical features of that company's new 42 in. by 58 in. two-color offset printing press. The sound movie shows the two-color press. Due to the unit type construction, single and multicolor models with identical printing units will be available upon resumption of the manufacture of printing machinery. The sound motion picture is available for use by trade groups, schools and printing plants by addressing the company direct.

William K. ("Bill") Edward, who for the last eight years has been covering Brooklyn, Long Island and Staten Island as a production engineer for the Linotype Company, has succeeded Charles W. Reed as Linotype representative in lower New York City. (Mr. Reed, after more than twenty-five years with Linotype, had asked to be retired and is now taking things easy on his farm in Dutchess County, New York.)

Douglas C. McMurtrie Passes

DOUGLAS C. McMURTRIE, 56, passed away suddenly as the result of a cold and subsequent heart attack at his home in Evanston, Ill., on Friday, September 29. His illness was brief. Funeral services were held on Tuesday, October 3 at the chapel, 1567 Maple Ave., Evanston. Surviving are his wife Adele K.; two sons, Havelock H., and Pvt. Thomas B. of the Army Air Force, and a daughter, Mrs. Helen Hodgson. He was Director of Typography for the Ludlow Typograph Co., Chicago.

Mr. McMurtrie was born at Belmar, N. J. He attended the Massachusetts Institute of Technology, but left school to engage in free lance work in type designing in New York.

In 1925 he came to Chicago as director of typography for the Cuneo Press and in 1926 he began his association with the Ludlow Typograph Co. He is popularly credited with having designed the typographical format for over 100 daily newspapers. He designed and created a number of popular type faces while associated with Ludlow.

He was known predominantly as an authority on printing history. He had made it a habit to rummage through libraries during his travels about the country in search of historical data for the many localized monographs on printing history which were published under his name. He was assisted in this work by Albert H. Allen.

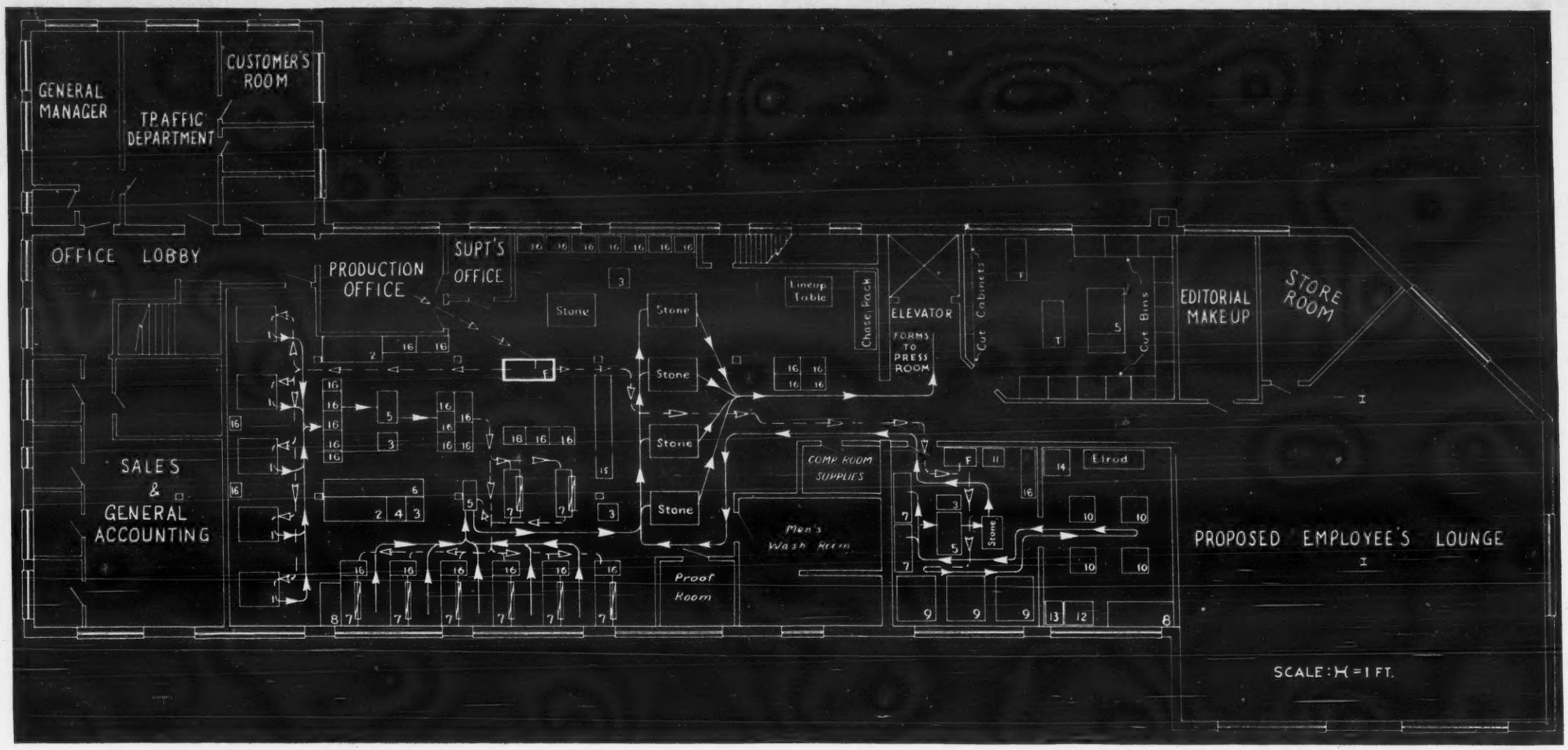
His best known works are: *The Book—The Story of Printing and Bookmaking*, and *Wings for Words*. The latter book is related to the invention of printing by Johann Gutenberg and was published in 1940.

During the first world war he became interested in the rehabilitation of crippled veterans. From 1917 to 1918 he was director of the Red Cross Institute for Crippled and Disabled Men.

For the past three years he served as educational chairman of the International Association of Printing House Craftsmen. In this capacity, he intensified the services available to local Craftsmen's clubs and also caused abstracts of technical articles from Graphic Arts publications to be published monthly. His arrangement of technical programs for the Craftsmen's annual conventions were commented upon favorably. His services as a speaker were in frequent demand throughout the country.

Whatever else might be said of him, everybody recognized that McMurtrie's capacity for work was great. He was a veritable human dynamo. Physically ponderous in weight (well over 300 pounds) his brilliant writing and speaking talents fascinated everybody. This combination belied the old saying that gray matter and oversize body don't work together.

Douglas C. McMurtrie's own memorial will endure through his literary abilities.



Second-Floor Office and Composing Room Equipment Layout and Workflow Diagram in Plant of Rufus H. Darby Printing Co., Washington, D. C.

Here is an interesting composing room layout with average workflow lines drawn in. As in the case of any other company doing a diversified line of commercial printing, there are deviations in the path taken by the work through the composing room from that indicated in this diagram.

KEY TO EQUIPMENT

F—Foreman
T—Table
1—Linotype
2—Magazine racks
3—Saw-trimmer
4—Miter jig saw
5—Proof press
6—Flat top makeup bank
7—Type and makeup cabinets
8—Machinist's bench
9—Monotype keyboard
10—Monotype caster
11—Monotype keyboard equipment
12—Monotype caster room equipment
13—Air compressor
14—Strip material case
15—Furniture racks with built-in job chase racks
16—Galley rack

Some interesting items about this composing room may be mentioned as follows:

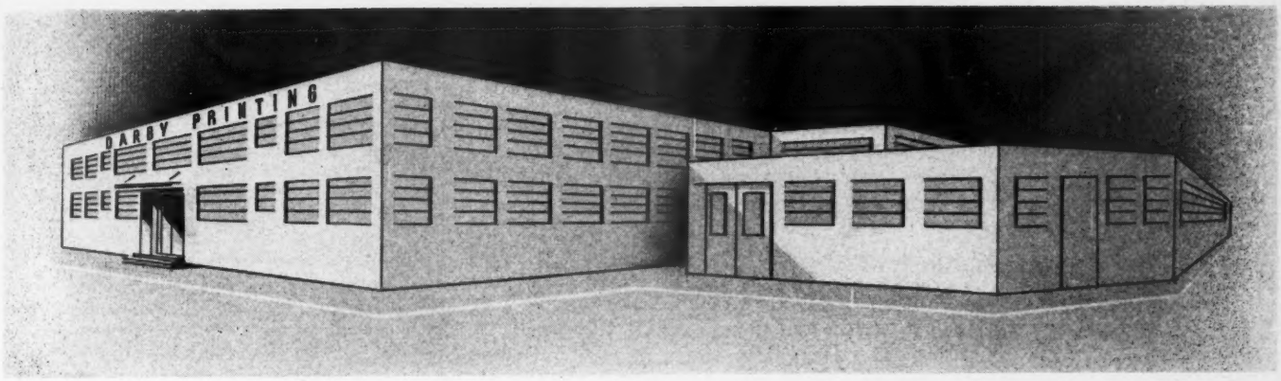
Note that there are two groups of racks *2* holding magazines for the line-composing machines *1*. These racks have a capacity of 42 magazines with which to supply various type face requirements.

In reality, the Monotype department is a self-sustained composing room within a composing room, inasmuch as the following equipment accompanies the keyboards and casters: Two type and makeup cabinets *7*; a saw-trimmer *3*; a proof press *5*; a galley rack *16*, and a stone.

Five saw-trimmers *3* are distributed at strategic points in the composing room.

There are four proof presses *5*.

For standing material, type in process and particularly type for publication work, there are 33 galley racks *16* located in various places. The galley racks *16* at the ends of the type and makeup cabinets *7* minimize excess footwork on the part of the men doing assembly and hand composition.



"Industry cannot wait until the last shot is fired to plan for the future," Darby Printing tells its customers.

Architect's drawing of new home of Rufus H. Darby Printing Co., 24th and Douglas N.E., Washington 18, D. C. Plentiful number of skylights and windows provide prime needs of the printer—natural daylight and ventilation.

Workflow *is streamlined in new plant location of Rufus H. Darby Printing Co., Washington, D. C.—Firm executes publications and folders and booklets in color*

By STAFF WRITER

THE Rufus H. Darby Printing Co., letterpress printing firm, is now established in its new home at 24th and Douglas N.E., Washington 18, D. C. The two-story steel and concrete building was formerly occupied by the *Pathfinder* Publishing Company. Darby Printing executes general commercial letterpress printing, but at the present time 90% of the company's volume consists of publications and color advertisement folders and booklets. Moving from the old to the new location required better than six months' time because of manpower and materials problems involved in getting the new building ready for occupancy. But the company completed moving operations early in July and now is busily engaged in its regular lines of work.

The conditions which made the move to new quarters imperative during wartime were related by Otis H. Johnson, Secretary-Treasurer and General Manager. He said that for a half-century the company's principal business consisted of

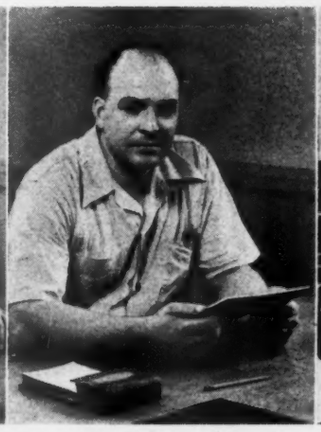
OTIS H. JOHNSON

Secretary-Treasurer and General manager of Rufus H. Darby Printing Co. As is well known to many printing executives, Mr. Johnson is association minded. Among his other activities, he has given liberally of his time to two important groups. He served as president of the Graphic Arts Association of Washington, D. C., in 1941. In 1942-43, he was president of the United Typothetae of America.

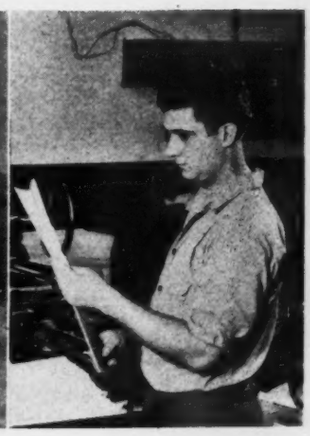
PRODUCTION EXECUTIVE STAFF IN PLANT OF DARBY PRINTING, WASHINGTON, D. C.

GEORGE L. ADAMS
Plant Superintendent

OSCAR S. LONG
Composing Room Foreman



RALPH F. MEINHARDT
Pressroom Foreman



GEORGE D. ROSS
Bindery Foreman

SUGGESTIONS TO CUSTOMERS

IN a letter to customers, the Rufus H. Darby Printing Co., Washington, D. C., tells how printing orders may be facilitated under war conditions. The suggestions certainly should help in securing customer cooperation inasmuch as Darby Printing doesn't leave anything to guesswork.

The suggestions are as follows:

"1. Anticipate your printing needs in advance. Give us just as much time for the job as you can.

"2. Keep your print jobs simple. Eliminate the frills.

"3. Give us clean and clear copy. Make your changes in the manuscript; don't wait to make them on the proof. Send along a layout with each job. Read and return your proofs as promptly as you can.

"4. W.P.B. Order L-120 has eliminated many sizes, weights and kinds of paper; consult us before planning your job.

"5. Pickup and delivery service is restricted in many ways. Mail copy, proofs and special instructions when possible. Ask for special messenger service only after all other methods fail.

"6. Clear your production problems by calling Decatur 3535. They can be settled quickly at the time you are planning your printing."

tariff work, small one-color advertising folders and general form printing. The increase in business over a long period of years gradually crowded the company in its old quarters. To handle the increased volume, it was necessary to rent outside space with the attendant handling of certain production operations in space outside of the company's own plant.

Ten years ago, executives of the company launched upon a program of plant and mechanical modernization and installed labor-saving methods at every step of production. At the time the plant was being rebuilt, the sales organization was developed and trained to produce the kind of work which could be printed economically by improved methods.

"During this period," said Mr. Johnson, "the company spent on plant modernization and improvements $125,000. Its employees increased from 15 to 150.

"The new policy," he continued, "consisted of an entire coverage of the business and was divided into three phases which were developed together. These were:

"(1) Plant modernization

"(2) Sales policy directed toward securing the kind of work best suited to the organization

"(3) Training and developing plant personnel."

The new location of Darby Printing at 24th and Douglas, Washington, D. C., provides double the floor space over the company's former downtown plant. The building is fitted with many windows and skylights to insure better working conditions for the employees and to provide maximum daylight and proper ventilation.

One of the important advantages of the new location, if not the most important, is the B. & O. railway freight siding which extends alongside a spacious paper warehouse. In some cases, paper handling damage is a serious thing for the printer. Paper stocks can be unloaded and trucked directly into the warehouse in minimum time and with little handling damage. As will be seen by examining the ground floor plant diagram, not only paper intake facilities are enhanced by the railroad siding, but shipping facilities for finished work in large quantities also are provided. In addition, two truck loading platforms can be used for delivering work.

Mailing Department Installed

In order to provide complete facilities to Darby customers special attention has been extended to the mailing department so that publications, catalogs and direct mail pieces can be put into the mails. In addition to installing automatic machines for addressing directly upon the magazines, a complete service has been installed for handling mailing lists with standardized Pollard Alling equipment.

(*Continued on Page 21*)

Ground Floor Equipment and Workflow Diagram in Plant of Rufus H. Darby Printing Co., Washington, D. C.

Here are shown the Pressroom, Bindery, Mailing, Paper Warehouse and Shipping Departments. In addition to general commercial printing, this firm executes magazine, catalog and direct mail work. The building is ideally suited to Darby Printing's purposes.

KEY TO EQUIPMENT:

Pressroom:

16—Chase rack
T—Tables

Bindery:

F—Foreman's desk
H—Stitcher
J—Paper drill
K—Perforator
T—Table

Mail Room:

F—Foreman's desk
A—Reliefograph
C—"H" printer
D—Mailing machine
T—Table

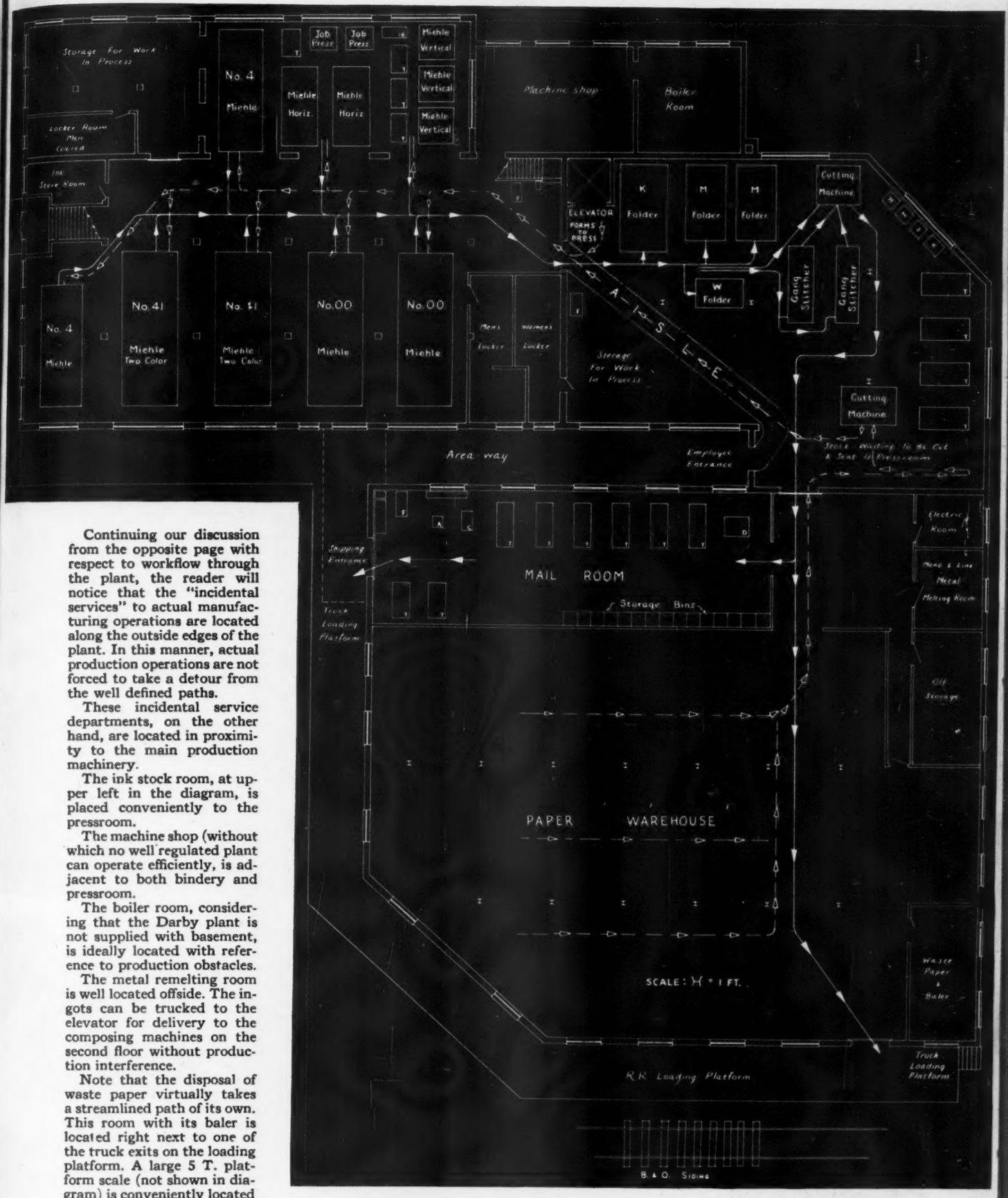
Production and mechanical executives will be interested in tracing the straight-line workflow in this plant as indicated by the arrowed dash and solid lines. To give a brief description of progress of work through the plant, we'll assume that a magazine is to be printed. The forms have been delivered from the composing room from the floor above by the elevator as is indicated in the diagram.

Meanwhile, paper stock from the warehouse has been trucked to the cutting machine just inside the bindery door where the paper is trimmed to size (assuming the paper in this instance must be cut to size). After being trimmed, the stock is sent from the cutting machine to one or more presses in the pressroom as indicated by the arrowed dash lines.

From the presses, the printed sheets are delivered to the folding machines in the bindery; thence to the gang stitchers; thence to the cutting machine where the bound magazines are trimmed, after which they are trucked to the mailing room for wrapping and addressing. From this department, the magazines are delivered in mail bags to the truck loading platform at the extreme left.

In case the magazines are not to be prepared for mailing, the trucks from the bindery deliver them to the shipping room where they are bundled or boxed and then are delivered to the loading platform for shipment by rail or truck as shown at the lower part of the diagram.

Other-than-magazine work in progress through the pressroom, of course, will take a slightly variable flow, but in every case it moves ahead efficiently. A variable path for instance, would be taken by the work in the case of an envelope job, stock for which is delivered from the paper warehouse direct to the job section of the pressroom and then perhaps the finished envelopes are taken direct to the truck loading platform in the lower right-hand corner of the diagram. Other deviations would be in the case of small jobs which are to be stapled by Stitcher *H*, or which need to be drilled by *J* or perforated at machine *K*.



Continuing our discussion from the opposite page with respect to workflow through the plant, the reader will notice that the "incidental services" to actual manufacturing operations are located along the outside edges of the plant. In this manner, actual production operations are not forced to take a detour from the well defined paths.

These incidental service departments, on the other hand, are located in proximity to the main production machinery.

The ink stock room, at upper left in the diagram, is placed conveniently to the pressroom.

The machine shop (without which no well regulated plant can operate efficiently, is adjacent to both bindery and pressroom.

The boiler room, considering that the Darby plant is not supplied with basement, is ideally located with reference to production obstacles.

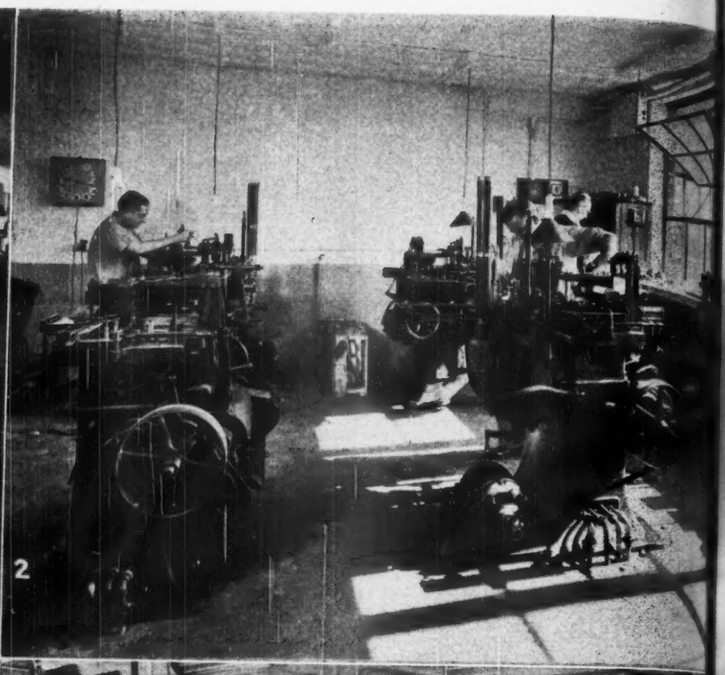
The metal remelting room is well located offside. The ingots can be trucked to the elevator for delivery to the composing machines on the second floor without production interference.

Note that the disposal of waste paper virtually takes a streamlined path of its own. This room with its baler is located right next to one of the truck exits on the loading platform. A large 5 T. platform scale (not shown in diagram) is conveniently located nearby.

Temporary storage for work in process can be placed immediately next to the pressroom (upper left), and in the triangular space immediately next to the bindery.

A regular part of the service Darby offers its customers is the storage of their printed jobs. Many large edition printings of booklets and folders are stored in the bins on the east wall of the mail room, which are held for customer instructions for mailing or shipping at a later time. The regular production is completed on a normal schedule and the part of the job which cannot then be delivered is assigned to an "S" Mailing Jacket, properly packaged and stored in the mail room bins, to await final disposition by the customer.

1



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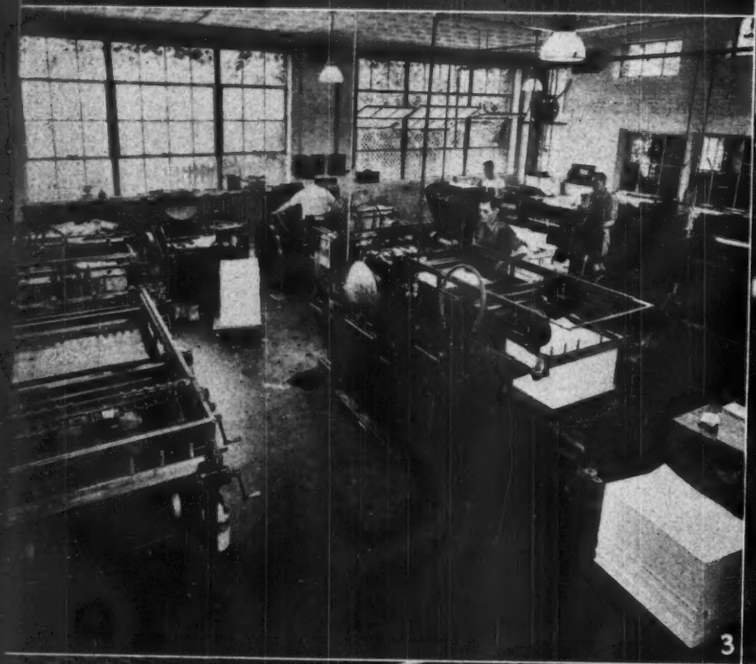

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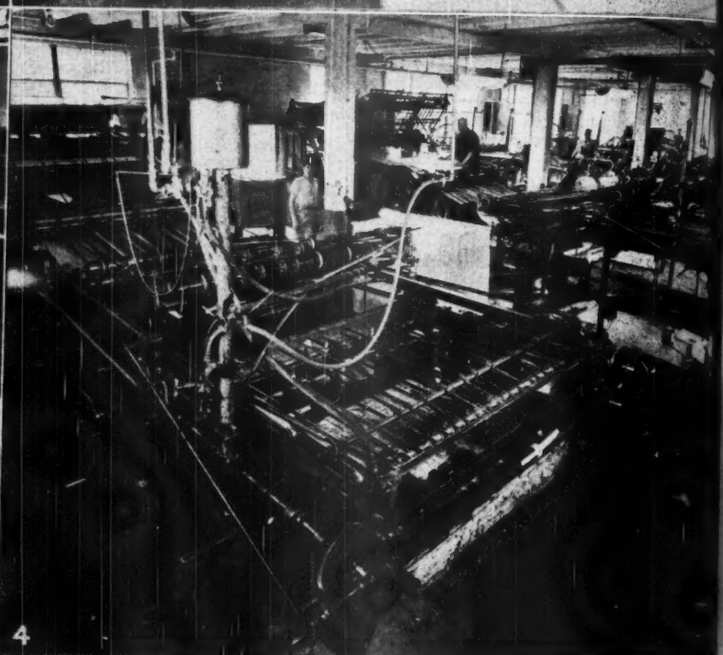

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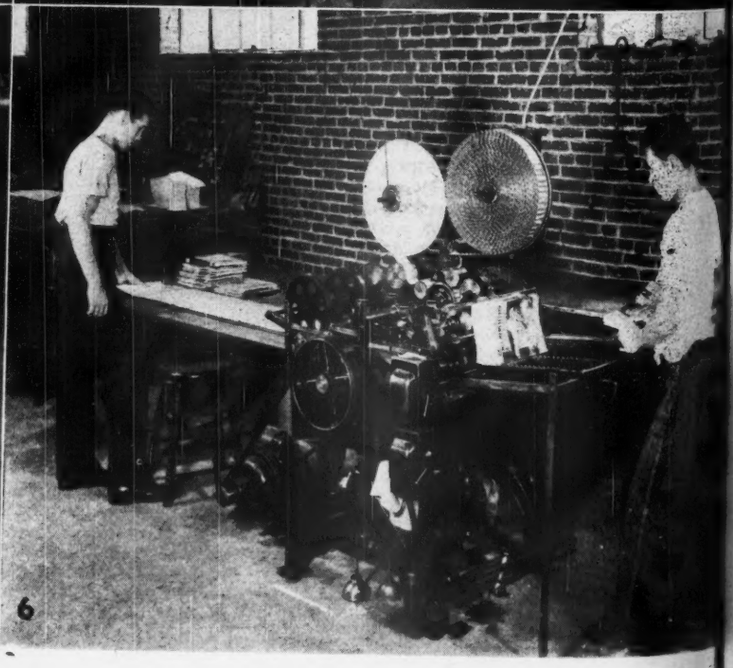


6

←◂ Views in Mechanical Departments of Rufus H. Darby Printing Company, Washington, D. C.

1—Hand and makeup section of the composing room. Linecomposing machines are at far end. Plenty of windows provide natural daylight and ventilation—Venetian blinds for tempering the sunlight; fluorescent lighting fixtures (only partially installed at time this picture was taken) provide artificial daylight. Note the ample temporary galley storage capacity at the end of each worktop.

2—Section of Monotype caster room. At the time this picture was taken, the complete hookup for caster at left had not been completed. An Elrod strip-casting machine is also a part of the equipment in this room.

3—Section of the pressroom. The job pressroom consists of seven job presses ranging in size from 10 in. by 15 in. to 22 in. by 28 in.

4—In this cylinder section of the pressroom there are six presses, including both single and two-color presses.

5—View in the mailroom. Here magazines are addressed directly upon the publication by AA Addresser, Dick strip or wrappers and stencils are cut and mailing lists maintained.

6—View of AA Addresser in operation in the Darby Printing mail room.

WORKFLOW

(Continued from Page 18)

Tolerance and Patience

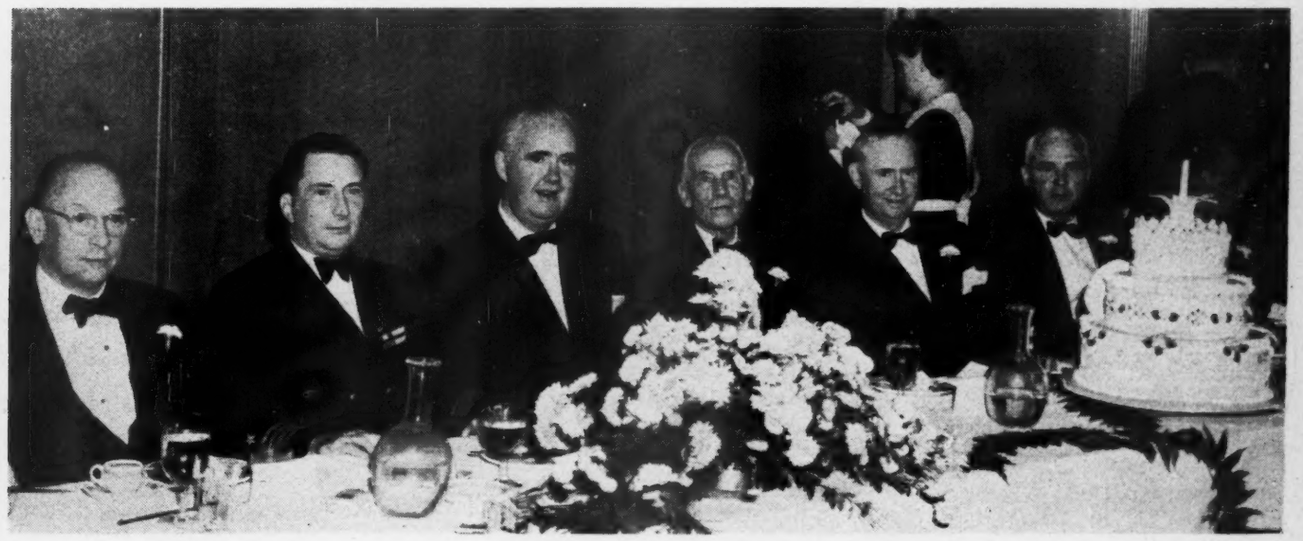
In a letter to customers, announcing completion of the move into the new plant, is found an excellent description of the difficulties encountered in wartime plant moving. An excerpt from the letter is as follows:

"During the past six months, we have learned better (we hope) how to be tolerant. We have learned better (we hope) how to be patient. And we have learned something of what our friends in other businesses are up against.

"We found out, for instance, what 'unavoidable delays' can mean when a schedule calling for ten electricians gets knocked to pieces by having only two show up for work. Or when brick work is scheduled to start in two days—and then the bricks are not delivered for two weeks—and then no bricklayers come around for two weeks more. Or when cement workers report, ready to do the job, only to find that the materials are not there yet—and when the materials do arrive, they turn out to be the wrong stuff.

"Yes, we have learned a lot about what a nation has to put up with when there's a war to be fought and won. Industries, especially those not directly connected with the war effort, have lost the cream of their workers to the services and, until victory comes, must function at reduced speed.

"Our job of moving, we are glad to say, is finally completed and, though it has been a nuisance, we are glad we made the change."



Section of Speakers' Table at Testimonial Dinner Tendered Timothy A. Ryan at Hotel Astor, New York, October 7, 1944

(Left to right) Arthur S. Thompson, General Manager, Geo. H. Morrill Co., Div. GPI; Capt. James J. Stahlman, USN, and Publisher of the Nashville (Tenn.) *Banner;* Joseph V. Connolly, President, King Features Syndicate; John Day Jackson, Publisher, New Haven (Conn.) *Register;* T. A. Ryan, Vice President, International Printing Ink, Div. Interchemical Corp.; John J. Shea, Toastmaster, and General Mechanical Superintendent, Hearst Publications; A. Wallace Chauncey, Vice President and Treasurer, Interchemical Corp.; (standing, back toward table) John B. Boscoe, Vice President, International Printing Pressmen and Assistants' Union.

NINE hundred executives in the Graphic Arts Industries paid tribute to Timothy A. Ryan at a testimonial dinner held at Hotel Astor, New York, on Saturday night, October 7. Mr. Ryan is Vice President of International Printing Ink Div. of Interchemical Corp. Executive representatives of newspaper, and commercial printing plants, manufacturers and suppliers, and various printing trades unions were in attendance.

John J. (Ted) Shea, General Mechanical Superintendent of Hearst Publications, presided as toastmaster. On the speaking program were John Day Jackson, Publisher of the New Haven (Conn.) *Register*; A. Wallace Chauncey, Vice President and Treasurer of Interchemical Corp., and John B. Boscoe, Vice President of the International Printing Pressmen and Assistants' Union. Mr. Boscoe substituted for Major George L. Berry, President of the Union, who could not be present. On behalf of the Union Mr. Boscoe presented Mr. Ryan with a gold-plated life membership card in the Pressmen's Union.

Mrs. Timothy (Mabel) Ryan was presented with a bouquet of American Beauty roses in honor of the 36th wedding anniversary of Mr. Ryan and herself.

On behalf of the assembled guests, Mr. Ryan was presented a certificate entitling him to a station wagon when automobiles again become available.

COTTRELL ROTARY P
for better m

Two colors or five colors . . . letterpress or rotogravure at 1000 to 1200 feet of white paper per minute . . . sheet fed letterpress from one to five colors up to 5500 sheets per hour.

Cottrell's many years experience in building rotary presses has paralleled the development of magazine publishing in this country. Cottrell has led the way in designing and building high-speed rotary presses and folders that have made possible the high standards of printing and the huge circulations evidenced in our national magazines.

With a combination of any of the Cottrell Presses shown here a magazine publisher can print faster and with better results, any type of magazine no matter how great or small the circulation may be.

During this present war period, while production of printing presses for commercial use is restricted, Cottrell engineers have been making intensive studies and experiments with sheet-feed and web-feed, high-speed rotary presses and folders for magazine printing. Further improvements are awaiting the coming of world peace.

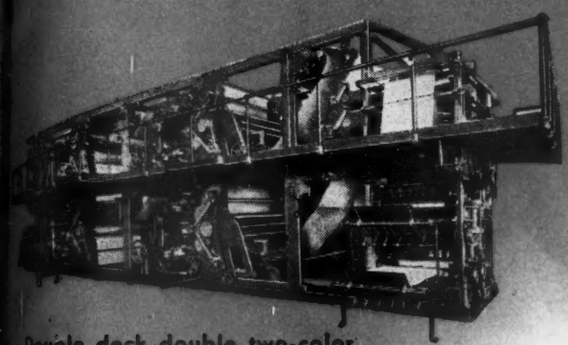
C.B.COTTRELL & SONS, CO.

Westerly, Rhode Island

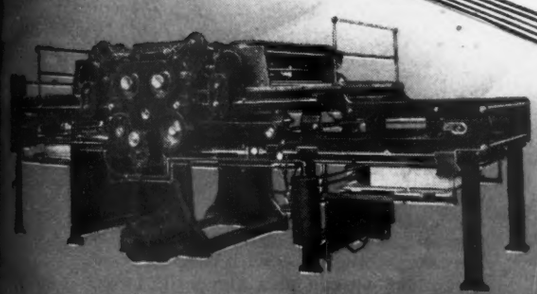
New York: 25 East 26th Street • Chicago: Daily New Bldg., 400 West Madison Street • Claybourn Division: 3713 North Humboldt Avenue, Milwaukee, Wis. • Smyth-Horne, Ltd., Chipstead, Surrey, England

PRESS COMBINATION magazine production

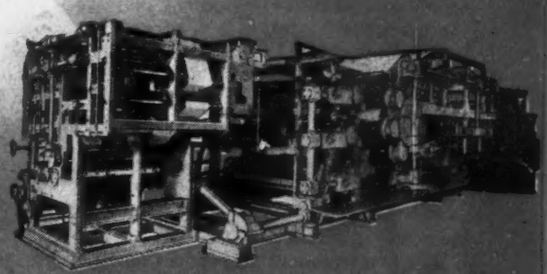
Rotogravure press built for two or more colors first side, four colors second side. Speed of 1200 to 1600 feet per minute.



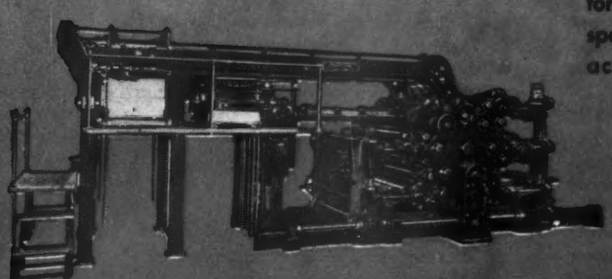
Double deck double two-color press prints 64 pages in two colors, or 32 pages in four colors at a speed of 1200 feet per minute.



Two-color sheet fed rotary press with flat delivery to print one or two colors . . . up to 5500 sheets per hour.



Double five-color web press for printing editorial and advertising sections. Prints at a speed of from 800 to 1200 feet per minute according to the ability to dry the ink.



For multi-color printing of magazine covers, inserts and general color work. The sheet fed rotary press can produce at a speed of up to 5500 sheets per hour.

LEMOYNE DEMAREST

Project the Totals Six Times

Printing Equipment Engineer wishes to impress again upon its readers that this report is only a sampling of the entire readership of this magazine. If the figures given in this report were to be projected over our entire readership, it would be safe to assume that the new equipment installation totals could be multipled a conservative average of six times for each piece of equipment reported upon.

Report of Printing Equipment Engineer's

Huddle with Printing Executives

In Plants Throughout the United States

By MacD. SINCLAIR

IN the September issue of *Printing Equipment Engineer* we presented the first section of our report to the printing industry with respect to trends in the industry and postwar equipment plans of our executive readers. This entire report is based upon replies received from 561 executives of printing plants throughout the United States. We received a total of 670 replies out of 3500 questionnaires mailed to well-rated printing plants ($7500 and up annual business volume). A number of plant executives (109) were good enough to let us know they are not yet ready to reveal postwar plans.

The first section of the report (September issue) dealt with technical trends in the industry, including New Building and New Building Addition plans of a number of printing and publishing firms. Without making further comment about Section I of this report, we'll now pass along to Section II.

We have broken down our report in printing plant departments because we believe our readers prefer to have it presented that way. Immediately below we present the Composing Room, Letterpress Commercial Pressroom, Newspaper Pressroom and Stereotype tabulations.

We also wish to impress again upon our readers that our report is only a sampling of the entire readership of *Printing Equipment Engineer*. If the figures

SECTION II

given in this report were to be projected over our entire readership, it would be safe to assume that the new equipment installation totals could be multiplied a conservative average of six times for each piece of equipment reported upon.

We do not care to indulge in dollar-value estimates of the cost of the equipment which will be purchased in the after-the-war period because of economic reasons.

Composing Room

THE composing room section of P-Double-E's questionnaire was answered by executives of 276 plants maintaining composing rooms. These are divided, according to kind of plant, as follows:

Combination	108
Newspaper	93
Commercial	69
Magazine	3
Book	3
Replies received from 3 trade composition plants bring the total to	279

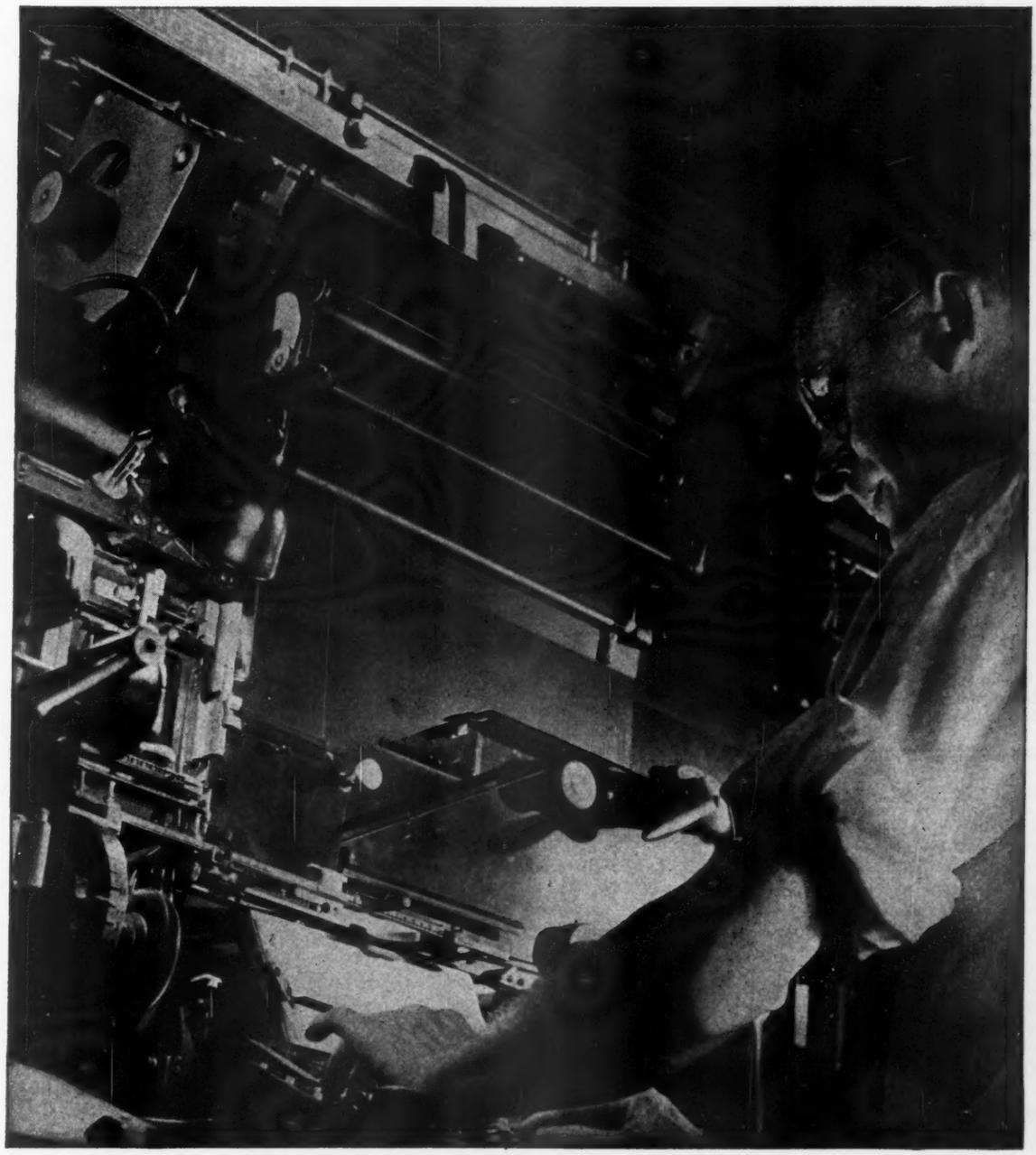
Indicative of the trend towards automatic line-composing machine composition, executives of 102 plants state their firms either will order such equipment or they are interested in installing it.

New Type Designs

A number of executives asked for new type faces. New type faces seem to be subject to the same progressive change as is the case with women's hats and wearing apparel. Perhaps the moratorium against production of new type faces instigated by WPB during the war may have something to do with this. To these executives we can pass along the information that the new faces will be forthcoming when conditions permit.

Proof Presses

An indication of the trend toward better printing consists of the information that executives of 136 plants will buy new proof press equipment. In many plants (if not in all of them) the proof press now has become a gauge for testing the printing qualities of the type elements used or produced in the composing room. Much defective material is detected right at the proof press because the newer presses are equipped with hard impression cylinders, or cylinders dressed with hard packing. Another reason for



There's a Linotype for every purpose

LOOK TO THE FUTURE — KEEP BUYING BONDS

TRADE LINOTYPE MARK

Linotype Garamond Bold No. 3 Series

the demand for modern proof presses is that many of them are used in taking reproduction proofs for the engraver, the offset-lith and the gravure platemaker.

Composing Machines

Equipment needs of the 283 replying plants range over the entire composing room field. Executives of 122 plants will buy 264 line-composing machines; 12 plants will buy 20 single-type machines; 94 plants will install 1396 new matrix fonts; 38 plants will buy 44 slug-and-rule-making machines.

We Report
in the November issue—

In the November issue of *Printing Equipment Engineer* we present the concluding Section III of our survey report to industry. This Section III of the report will cover the Photo-engraving, Bindery and Offset-Lith branches of the printing industry. In addition, interesting comments from a number of printing executives will be included.

Section I of *Printing Equipment Engineer's* factual trend and equipment modernization survey in the September issue has met with the hearty approval of printing plant executives and equipment makers who have been studying after-the-war conditions in the industry.

Metal Cutting Equipment

Metal-cutting equipment will be installed as follows: 19 plants will buy 166 saw-trimmers; 24 plants will buy 25 bandsaws; 62 plants will buy 70 power rotary mitering machines.

Metal Remelting

During the war, the manufacture of metal remelting equipment has also been held in abeyance. Executives of 58 plants state they will purchase new remelting equipment in the postwar period.

Composing Room Furniture

What might be called "furniture" equipment will be installed by 70 plants as follows: Type cases and cabinets, 32 firms will buy 80; 22 firms will buy 46 makeup tables; 17 firms will buy miscellaneous types of furniture such as galley cabinets, work benches, assembly banks and storage tables.

Executives of three firms state they will install as many line-up tables.

One newspaper plant states it will purchase 40 new trucks and 40 chases, while 2 firms are interested in newspaper page storage file equipment.

Miscellaneous equipment in varying amounts which will be ordered consists of patent base, operators' copy tables, routers, foundry type, plate shaver, chases for commercial use, automatic feeders for line-composing machines and numbering machines.

Newspaper Pressroom

ASIDE from an extremely lively demand for new newspaper printing presses in the several-year period following the close of the war, the outstanding trend seems to be that of facilities for printing run-of-paper color.

To the newspaper pressroom section of the questionnaire we received 156 replies. In these replies it is indicated that 108 pressrooms will install 498 new press units, of which 67 pressrooms will install 331 replacement units and 41 will install 167 additional units.

The newspaper pressroom totals probably should not be projected more than two times.

Provision for run-of-paper color will be made in the new presses to be installed in 52 pressrooms, while attachments for run-of-paper color will be purchased for present equipment in 31 pressrooms.

Improvements Wanted

We asked executives what improved features they desired in new equipment. As is indicated above, newspaper press color printing facilities topped the list. Next in order of frequency, executives state they want facilities for improving first impression offset made available for their present presses as well as having it incorporated in the new presses which they will buy. Frequency of demand for roller bearings in presses comes next.

Newspaper Presses

New Presses:	Units
67 pressrooms will replace	331
41 pressrooms will install additional	167
Total new units	498

Project this total not more than two times.

Rollers

Included in the newspaper pressroom questionnaire were requests for the kinds of rollers now being used and the kind of

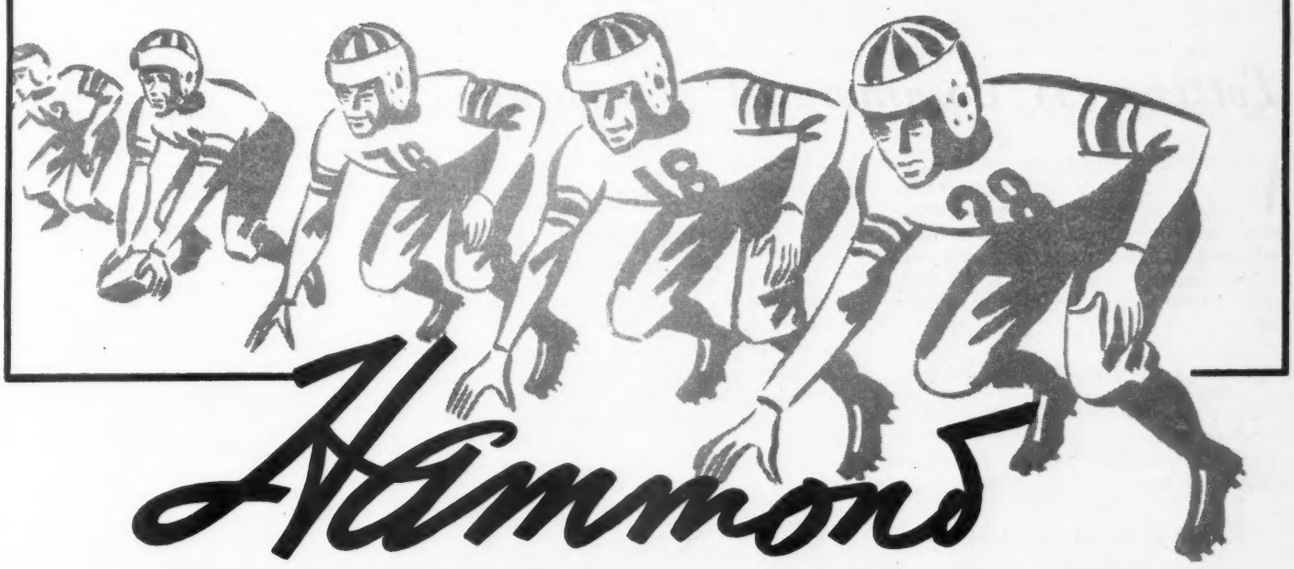
COMPOSING ROOM

Executives in plants supporting 276 composing rooms which are a part of the printing plant are broken down with respect to the kind of plant as follows:

Combination	108
Newspaper	93
Commercial	69
Magazine	3
Book	3
Trade composition	3
The 3 trade composition plants bring the total to	279

	Units
Line-composing machines:	
122 firms will buy	264
Single-type machines:	
12 firms will buy	20
Slug-and-rule equipment:	
38 firms will buy	44
Matrix fonts:	
95 firms will buy	1396
Automatic composition:	
102 firms will install or are considering installation of such equipment	
Metal-cutting equipment:	
Saw-trimmers—119 firms will buy	166
Bandsaws—24 firms will buy	25
Power mitering machines—62 firms will buy	70
Proof presses:	
136 composing rooms will install new presses	
Metal melting equipment:	
58 firms will install	58
Furniture (70 firms replying):	
Type cases and cabinets—32 firms will buy	80
Makeup tables—22 firms will buy	46
Miscellaneous—17 firms will buy miscellaneous galley cabinets, work benches, assembly banks, storage tables	34
Lineup and register tables—3 firms will buy	3
Newspaper trucks and chase for each—1 firm will buy	40
Newspaper page form storage file—2 firms will buy	2

FAST, TOUGH and RUGGED



Hammond EASYKASTERS

With the necessity of reducing costs after the war, your program should include an EasyKaster. Without a modern casting box, there is much wasted time that is rarely seen except by the men who are having to put up with slow-poke and inaccurate casting. The EasyKaster is the fastest and most accurate casting box ever built. It is the choice of most — make it your choice for better and lower-cost casting after the war.

2 MODELS

Hammond EK8-P. Full page, automatic-locking, flat caster. Available also without melting pot.

BUY THOSE EXTRA BONDS — NOW!

★ Hammond Machinery Builders INC ★

1604 DOUGLAS AVE. KALAMAZOO 54, MICHIGAN • EASTERN BRANCH: 71 WEST 23rd ST., NEW YORK 10, N. Y.

rollers which will be used after the war.

Executives in 213 plants state they are using:

Rubber	94	60.26%
Composition	60	38.46%
Synthetic	59	37.82%

Executives in 161 plants state that after the war they will use:

Rubber	66	42.31%
Synthetic	39	25. %
Composition	31	19.87%
Undecided	25	16.03%

Letterpress Commercial Pressroom

A NUMBER of trends are indicated in the 273 replies received from letterpress commercial pressroom executives, in which these executives have indicated that their firms will buy a total of 567 printing presses, divided as follows: Flatbed 313, rotary 104, platen 150.

Electros—Stereos on Rotary Presses

The rotary presses will be plated with electrotypes, so state 21 executives, while 19 executives state their new rotary presses will be plated with stereotypes.

Transition by 44 from Flatbed to Rotary

In 39 plants, executives state flatbed letterpress work will be replaced by new rotary press equipment. Five letterpress flatbed firms now doing magazine and label work will convert to rotary letterpress.

Improvements Wanted in New Equipment

A number of executives have enumerated improvements in new press equipment which they expect to install during the postwar period. Some of these are listed as follows:

(1) Micrometer adjustment of rollers and guides.

(2) Good ink distributor and impressional strength.

(3) Roll sheet-feed, printing and folding all in one unit.

(4) Positive sheet delivery.

(5) Accessibility for quick change from job to job.

(6) Fully automatic and better register and quality at present or greater speeds.

(7) A number specify fully automatic oiling.

(8) Several specify full roller coverage.

(9) Automatic stop for press when sheets jam up.

(10) Built-in spray equipment.

(11) Automatic impression and ink carriage trips on rotaries. Better feeder and delivery control. Need high-speed perfecting sheet-fed 4-color rotaries with slitter and folding mechanism attached.

(12) In the book field, higher speeds than now possible with flatbeds is of primary importance.

(13) Rapid sheet drier.

(14) Rotary rubber plate book presses.

One owner-executive states: "Our equipment purchases will be dependent upon business conditions in the postwar period. We will buy any new equipment upon which we can make a profit."

In direct contrast to the foregoing statement, a letterpress executive states: "Letterpress is a declining industry."

Electronic Equipment

We asked our readers to what extent electronic register, drive and counting equipment would be installed in the new presses. Of those replying, 25 executivse state electronic equipment definitely will

KIND AND NUMBER OF GRAPHIC ARTS PLANTS REPLYING TO PRINTING EQUIPMENT ENGINEER'S SURVEY QUESTIONNAIRE

Number questionnaires mailed to executives **3500**
Total plants replying **670**
Plants giving postwar plans **561**
Plants not yet ready to reveal definite postwar plans **109**

(Total annual business volume of 561 plants of all kinds giving postwar equipment plans is approx. $447,353,220.00)

	Plants	Depts.
Combination plants (These plants do commercial-letterpress-and-offset, commercial-and-magazine, commercial-and-newspaper, or book-and magazine printing.)	199	
Commercial letterpress printing plants	172	
Newspaper plants	137	
Offset-lith plants	15	
Plant offset-lith departments		59
Magazine plants	13	
Book plants	8	
Trade composition plants	3	
Plant composing departments		276
Specialty plants	4	
Photo-engraving plants	7	
Plant engraving departments		80
Stereotype platemaking plants	1	
Plant stereo departments		168
Gravure platemaking plants	1	
Bindery plants	1	
Plant bindery departments		173
Total plants replying	561	

Letterpress Commercial Pressroom

Printing Equipment Engineer **received 273 replies to the commercial letterpress pressroom section of its questionnaire. The summary is as follows:**

Replacement Presses: (Units)

127 firms will install flatbed **217**
39 firms will install rotary **70**
71 firms will install platen **110**

Additional Presses: (Units)

72 firms will install flatbed . **96**
25 firms will install rotary . **34**
26 firms will install platen . **40**

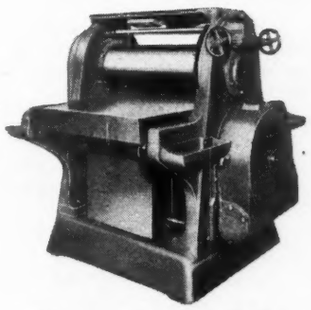
On new rotary presses firms will use curved plates as follows:

Electrotype plates **21**
Stereotype plates **19**

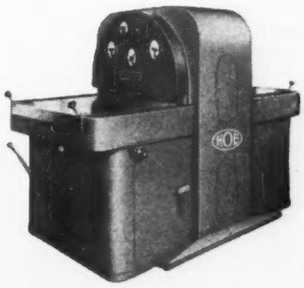
Work now done flatbed will be converted to rotary presses by following number of firms .. **44**

Now is the Time to Consider This Complete Line of Plate-Making Machinery

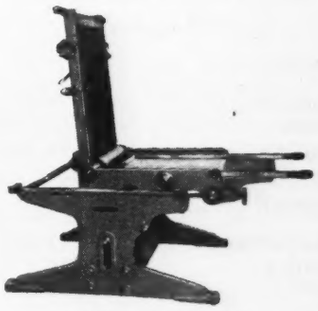
From this complete line of plate-making equipment, you can make your selection now of machinery needed for the expansion of or replacements to be made in your plant. All of them are carefully designed to do a particular job with the utmost satisfaction. All of them are precision built to the traditional Hoe standards of quality. Write for new literature which contains complete specifications.



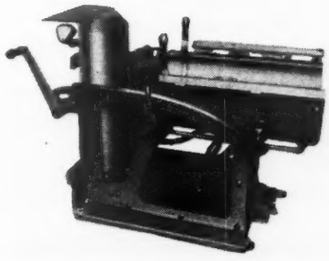
Monarch 11 Mat Roller



Direct Pressure Matrix Moulding Press

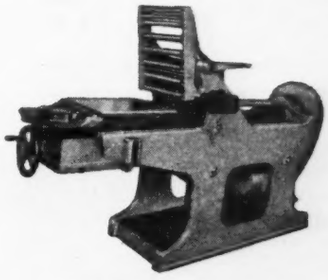


Flat Speed Mould

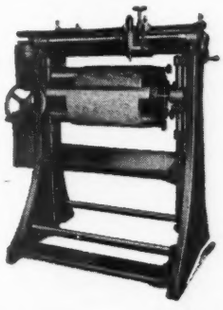


Curved Casting Mould

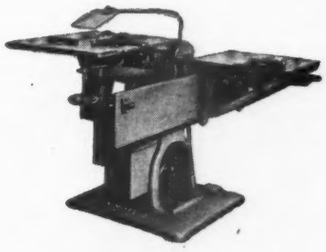
Shaving Machine—Cutting off Cylinder



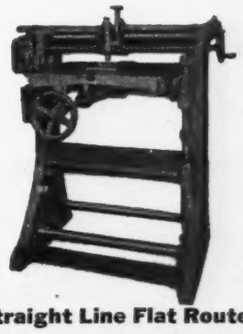
Flat Shaving Machine



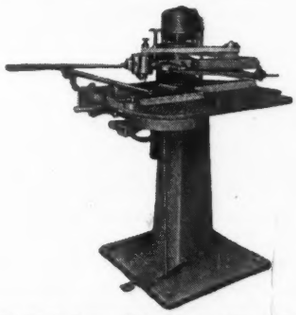
Curved Plate Routing Machine



Saw Table and Monorail Trimmer

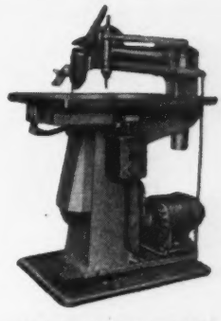


Straight Line Flat Router



Radial Arm Routing Machine

R. HOE & CO.
INC.
910 EAST 138th STREET
NEW YORK 54, N. Y.
BOSTON **SAN FRANCISCO**
CHICAGO **BIRMINGHAM**



Combined Jig Saw and Drill

be installed, while 10 executives state they are considering such installation.

Inking Rollers

We also asked our readers two questions about rollers: (1) What kind they are using now, and (2) What kind they expect to use after the war. We received 273 replies to these questions, some executives answering the questions even if they did not reply to our request for other information. The results are tabulated immediately below:

Inking Rollers Now in Use
(273 replies)

Flatbed:

Composition	200	73.62%
Rubber	47	17.22%
Synthetic	53	19.41%

Rotary:

Composition	35	12.82%
Rubber	29	10.62%
Synthetic	20	7.33%

Platen:

Composition	189	69.23%
Rubber	23	8.42%
Synthetic	19	6.96%

Kind of Inking Rollers to be Used After the War

Composition	86	31.5 %
Rubber	34	12.45%
Synthetic	35	12.82%
Undecided	129	47.25%

Stereotyping

PRINTING EQUIPMENT ENGINEER received 169 replies to the stereotype section of its questionnaire. The kinds of plants were divided as follows:

Newspaper plants	129
Commercial plants	22
Combination plants	17
Platemaking plant	1

Trend to Direct Pressure Molding

There is a distinct trend toward direct pressure matrix molding in the stereotype section of the industry, 45 executives stating they expect to install this kind of equipment. On the other hand, 40 executives state they expect to continue molding by roller but with new equipment when it becomes available.

Color Process Work

Another interesting trend which goes along with the providing of color printing facilities on printing presses is indicated by the replies of 59 executives who state they expect to do stereotype color process work and will install equipment for that purpose.

Metal Melting Equipment

In querying executives about the type of new metal-melting equipment they will be interested in after the war, we find that the answers of 140 plant executives are as follows:

Gas (Immersion)	88	52.07%
Electricity	44	26.04%
Oil	7	4.14%
Coal	1	.59%

(To be concluded in November issue)

Stereotype Platemaking Equipment

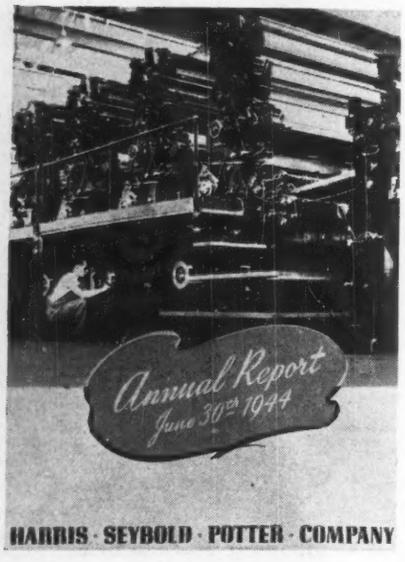
A distinct trend toward direct pressure mat molding is indicated among stereotype platemakers, particularly for newspapers. Many of those who expect to continue roller molding, however, will want new roller molding equipment. The trend toward vacuum plate casting boxes is distinct.

Tabulation of various kinds of stereotype equipment to be installed by 169 plants is as follows:

	Units	
Direct pressure presses	45	26.64%
Roller molding	40	23.67%
Vacuum casting boxes	107	63.31%
Vacuum scorchers	92	54.44%
Curved plate casting and finishing equipment	21	12.48%
Complete new stereo plants	4	2.36%
Will install color equipment	2	1.16%
Flat casting boxes	11	6.50%
Plate shavers	23	13.60%
Routing machines	3	1.77%
Stereo saws	4	2.36%

Demonstration of Process

The annual report of Harris-Seybold-Potter Company for the year ending June 30, 1944, has been published. The report consists of 16 pages and cover. The cover is executed in four-color process offset and shows section of the pressroom in the plant of Stecher-Traung Litho. Corp., Rochester, N. Y. The cover colors are rendered more brilliant by all-over varnishing.



The inside pages of the report demonstrate what can be done by simple one-color (blue) and black typography and illustration. We notice that in the design of the inside pages the superimposing of any amount of reading matter over color backgrounds has been avoided. This makes for ease of reading. Not only is this publication an annual financial report to stockholders, but it is also an excellent demonstration of what can be done with the offset process without too much art, platemaking and presswork.

A particularly interesting page is that containing a chart shown in ABC manner how the sales dollar was divided. Even if the average person is somewhat mystified by stony mathematical tables (as most of us are), this chart will enable anyone to understand how the firm's money has been spent.

Issues Mid-Season Calendar

Matrix Contrast Corporation, Empire State Bldg., New York 1, New York, is distributing a mid-season blotter calendar. The blotter consists of three separate

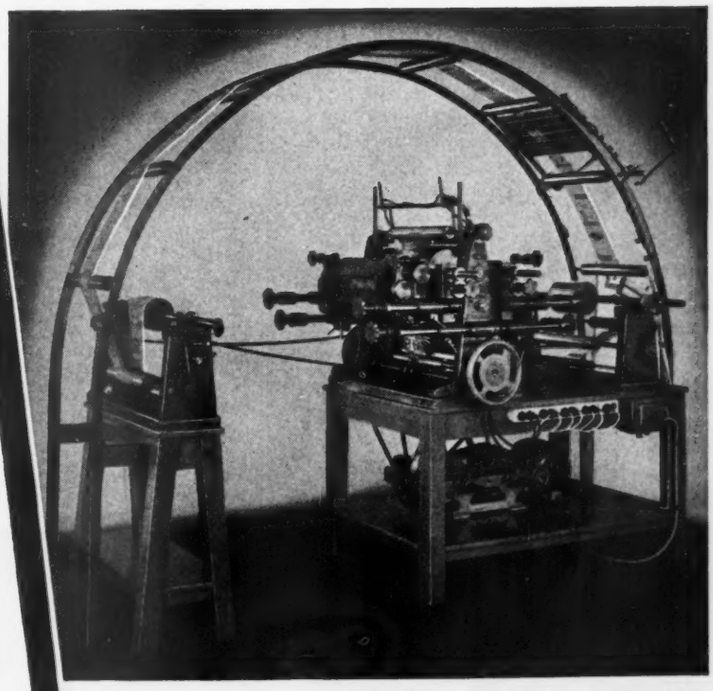
leaves bound swivelwise with brass fastener to a celluloid cover. Upon the cover is printed a calendar by months extending from July 1944 to June 1945 inclusive. The calendar in particular is gotten out for those executives who find it necessary to plan ahead during the fall months and are unable to locate a calendar for the coming year. The calendar is 3⅛ in. deep by 7¾ in. wide. Address your request to Matrix Contrast Corporation at the address given above.

Messages for G. I. JOE'S OVERSEAS

SKF
Puts the Right Bearing in the Right Place
DEEP-GROOVE BEARINGS
Single row with deep, uninterrupted raceways permitting radial and thrust loads in either direction. Groove curvature conforms closely to balls, resulting in large contact areas.
One or more of these types are used here—
CYLINDRICAL ROLLER BEARINGS
A single row of cylindrical rollers guided by flanges. Long contact surfaces between rollers and races. Also made with two rows of staggered ultra-precision rollers.
SELF-ALIGNING BALL BEARINGS
Self-contained. Their inherent property of alignment insures full capacity while compensating for any inaccuracies due to initial misalignment, shaft deflections, distortions or weave.
SPHERICAL ROLLER BEARINGS
Also self contained. Completely self-aligning for extra heavy radial and thrust loads or for severe shock conditions. Barrel-shaped rollers in a uniform path assure positive roller guidance.
These bearings never need adjustments . . . require only minimum lubrication.
SKF
Ball and Roller BEARINGS

Many of you overseas G.I.'s have read the messages on cellophane wrappers of chocolates and other delicacies, but you have probably never given a thought as to how they got there. Know, then, that thousands of impressions are made every hour on wax paper and cellophane by this Two-Color Aniline Web Printing Machine... that accurate register, low starting torque, quick pick-up, high speeds and low costs result from the use of SKF Bearings on this machine. As products of the Printing Industry invade Europe, the responsibility for peak bearing performance rests heavily with SKF's. 5660

SKF INDUSTRIES, INC., PHILA. 34, PA.



● *Built by* HAIDA ENGINEERING CO.

DOT ETCHING—*What it is in Offset-Lith color process work—"Making little dots out of big ones"*

By WAYNE GASPAR*

**Platemaking Superintendent, R. E. May, Inc., Cleveland, Ohio.*

IT is not possible to explain in simple manner all the fine points of the technique used by offset-lith color correction artists in dot etching separation negatives and positives for color process work. Dot etching is employed in making both albumin and deep etch plates. We'll attempt a simplified explanation however, for the benefit of those mechanical and production executives who have looked upon this phase of plate making as something mysterious. This article has been prepared after hearing Fred Hoelperl discuss *The Mystery of Color in Offset-Lithography* before the Cleveland Craftsmen's Club recently. Mr. Hoelperl is a color correction artist with Copifyer Lithograph Corporation in Cleveland.

Every executive understands that a set of four-color process plates, for instance, are obtained through photographing of the same subject in color as many times as is necessary to reproduce the primary colors and black. This procedure calls for a negative or positive for each of the yellow, red, blue and black colors.

The camera is a wonderful invention. Together with color sensitive films and filters, it is important to the color process. As yet, cameras, films and filters have not been perfected to the point where they can be made to produce art work in true color value. Hence, in order to obtain true color likenesses, it is necessary to interject the human element into the process.

Now, to get true color values when reproducing color art work, the halftone negatives or positives must be corrected by dot etching. This dot etching is done by a color separation artist—a man trained to know just how much yellow, red, blue, and black is needed in any area in each of the negatives to obtain the desired color. Through his skill and experience, he knows where color should be intensified to obtain best likeness to the copy.

By exposing ("shooting") the color separation negatives on four color process work at the following halftone screen angles, all screen pattern will be eliminated. The exposure for the yellow negative is taken at 90 deg.; the red at 105 deg.; the blue at 75 deg., and the black is always shot at 45 deg. angle. As a result, the halftone dots form miniature concentric circles. Each of the dots slightly overlaps its fellow dot.

After the halftone negatives or positives have been made, they are given to the color correction artist for dot etching.

Dot Etching

Dot etching is the term used when the size of the halftone dot on a halftone negative or positive is made smaller by the action of a chemical solution. Dot etching may be employed on any screened negative or positive. Usually, however, from 120 to 150 line screens are used by platemakers.

On continuous tone negatives or positives one couldn't very well use the term "dot etching," because the halftone dots don't exist. The tone values are all solids with varying degrees of density. The halftone negatives or positives, however, show extreme black and white contrast dots.

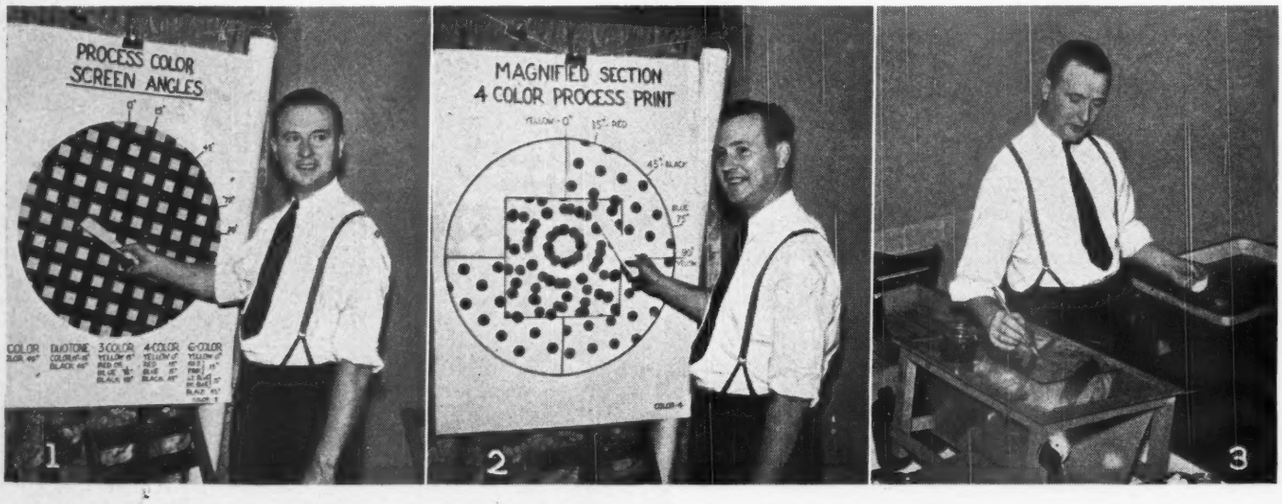
The color correction artist works over an illuminated glass top table with the negatives or positives resting on the glass surface, to perform the dot etching operation.

For fine detail dot reduction, the etching solution is applied with a fine brush. Flat etching the entire negative how-

(*Continued on Page 34*)

By Comparison

"The automobile is an extension of the foot, the machine an extension of the hand, the telephone is an extension of the ear, television an extension of the eye. Printing is an extension of the mind *and* the heart."—Fred W. Hoch in *The Printing Commentator*.



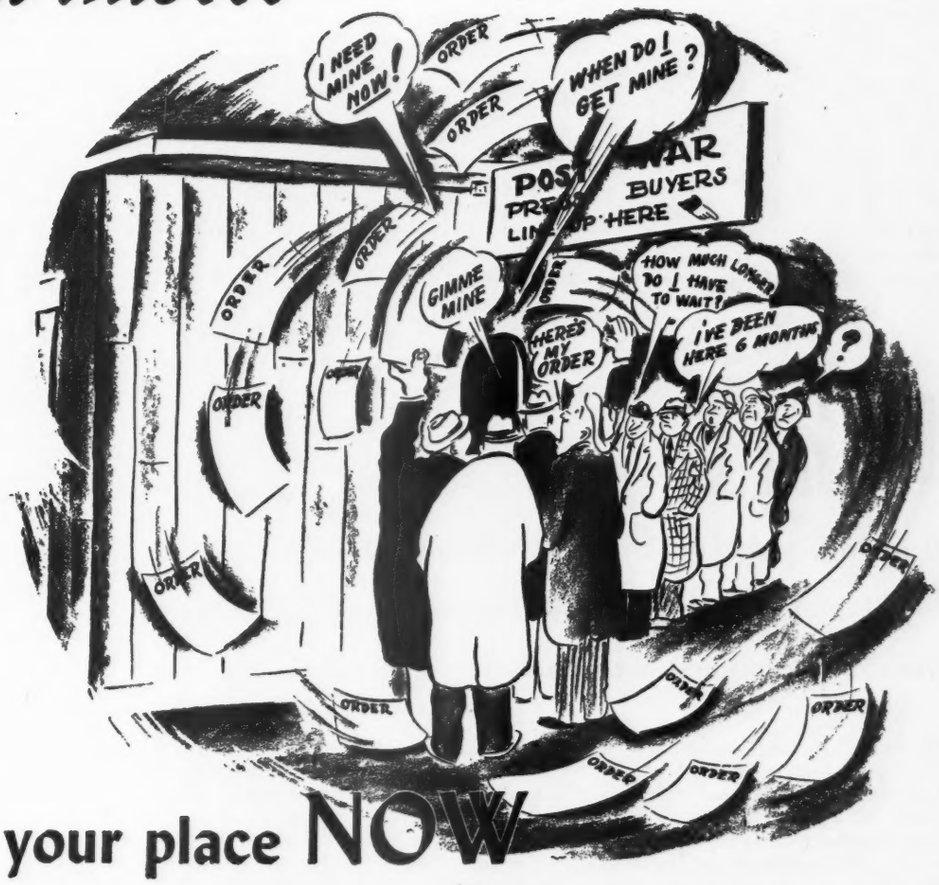
Shirtsleeve informality prevailed when Fred Hoelperl explained offset-lith color process to Cleveland Craftsmen at its September meeting. Mr. Hoelperl is color correction artist for Copifyer Lithograph Corporation, Cleveland.

1—At first thought, a tiny thing like a halftone dot would seem to be just too little to talk about. Its size and position in relation to myriad neighboring dots, however, governs the success or failure of a job of four-color process printing by offset-lithography. Here Mr. Hoelperl was snapped while explaining the screen angles for the different colors.

2—Before a greatly magnified section of four-color process printing, Mr. Hoelperl explains how screen separations appear in the finished print. The dots in this chart were shown in color. The speaker explained that instead of shooting the red at 75 deg., it is now customary to position the screen at 105 deg. in order to avoid "pattern" in the print.

3—Color Correction Artist Hoelperl gives visible demonstration of dot etching negatives for four-color process work. The negative rests upon a miniature glass top table with underneath illumination. He applies etching solution from the jar with a fine brush exactly the right local areas to reduce the size of the halftone dots where more color is needed on that particular negative. From time to time, as the work progresses, the action of the etching solution is stopped off by swabbing the negative with a wad of cotton saturated with hypo and water from the tray.

Avoid this...



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DOT ETCHING

(Continued from Page 32)

ever, is done in a tray containing the etching solution.

Through the use of a brush the artist applies the etching solution to the fine detail area needing dot size reduction to increase the intensity of the color for that particular plate. For instance, if there is too much blue in the lips of a girl in a positive he reduces the dot sizes in the lip area to weaken the blue plate and to permit stronger printing of the red and yellow plates. On the other hand, if he is working on a set of negatives, he dot etches the lip area in the red and/or yellow negatives (whichever is necessary) to secure more lively color. From time to time as his work progresses, the artist stops off the action of the etching solution with a cotton swab soaked in hypo solution to permit examining the area in which the color is being reduced.

In reducing the size of the halftone dot, the outside edges of the dot are dissolved. While some of the silver in the center area of the dot is removed by the etching solution, not enough is taken away to destroy its density.

On continuous tone negatives or positives there aren't any halftone dot formations. In this case, the density of the various solids is reduced by etching.

Etching may be done on continuous tone negatives or positives, but in these cases, as is stated above, the density of the tones is reduced.

The two most commonly used solutions for etching negatives or positives are (1) Ferricyanide and hypo, and (2) Iodine and cyanide. The latter solution is poisonous and care must be used in handling it.

Future *of offset-lithographic equipment dwelt upon by speakers at convention of National Association of Photo-Lithographers — The equipment situation discussed by prominent manufacturers' executives*

THE twelfth annual convention of the National Association of Photo-Lithographers was held in New York, N. Y., on Thursday, Friday and Saturday, September 21-22-23. There were 712 registered for the convention, which is said to be the most successful in the history of the association. A highlight of the meeting was the presentation of a One Thousand Dollar "G" War Bond to Walter E. Soderstrom, executive secretary of the association. In addition, a hand-tooled leather volume carrying cards of appreciation from members of the association was presented to him.

Short abstracts of addresses of several speakers are printed below. While several other excellent addresses were delivered by well known offset-lith executives, our report of the convention is related to the equipment and supplies fields in the lithographic industry during the post-war period.

Postwar Platemaking Developments

ERNEST E. JONES, President of the Graphic Arts Corporation of Ohio (Toledo) talked interestingly upon new developments in the postwar period. Among other things, he said he sees quite an advancement coming in the lights to be used in the camera room. There is the flourescent type of lamp which can be made up in rectangular or square banks and will more evenly light the copyboard, be more constant in value and color, cooler, dust and fume free. This type of lamp can be mounted on the camera frame, conserving floor space, making them easier to handle and generally being more satisfactory to the camera operators. There are also other new type of lamps, such as the water cooled vapor lamp, the incandescent lamp and the DH-1 mercury lamp. The mercury lamp is especially interesting, because it is a new type printing lamp that has a low heat intensity and is inexpensive to use. Approximately six bulbs of this type will do the work of a 35 amp. lamp and will last about 1000 hours.

The advanced science of war has greatly improved lenses. We will get much better detail and color rendition, due to greater sharpness and light transmitting powers. Some of them will be made of glass and some of plastics, but they will be much more accurate than in the past.

The straight line reverser is quite new and takes the place of the prism when it is necessary to reverse the position of copy without stripping, when photographing direct screen negatives. This reverser is accurate and should be in every modern camera room where a variety of work is handled.

Measured photography by the use of electronics, whereby copy will be measured and the correct exposure set, as indicated by the tone value of the original whether it be black and white or color process, will be valuable to every photographer.

The fluorescent process will also come into more general use, when more of our commercial art studios become better acquainted with the technique of preparing originals. It is a fine process, especially on book work, greeting cards, labels and various other uses where the preparation of the art can be controlled by the lithographer.

Color filters and the dry plates and films with which they are to be used, will be much closer balanced by the aid of color temperature-meters, spectrophotometers, colorimeters and other scientific developments. I do not recommend all of these meters for every camera room, but if we are to get more faithful reproductions, we must adopt the newest methods of science.

The Iriscope, a color filter, invented by C. A. Birch-Field, is a brand new one in the field and has a lot of possibilities. Any black and white photograph taken with an uncorrected lens can be translated through the Iriscope back into the original colors of the subject. Mr. Birch-Field explains that each ray of color forms a pattern at precisely the same depth in the film every time. With a film positive made from the negative, these patterns are projected through the filter to give a precisely true picture in the original colors.

The litho artist is coming into some new things, better opaquing because of new opaques, stains, dyes and the use of the electric eye to measure tone values.

The Craftint multicolor process gives the artist another color process. It involves the use of Craftint shading sheets, and eliminates negatives and positives for the yellow, red and blue plates. These sheets are processed with Benday tints at the proper angles and each sheet carries an invisible dot and line pattern in perfect register. A developing solution applied with an artist's brush brings up the dot pattern and a second chemical develops the lines. By superimposing dots on dots, lines on dots, etc., a total of 63 different colors is possible with all moire eliminated.

Proving has always been one of the worse headaches to the plate maker, as he cannot get the full value of his plate with hand-inking and because of the slow speed of the proof press. Matching of the platemaker's proof presents one of the greatest problems in the production of color lithography, if not the greatest. A proof press is being built today that we believe will correct this situation. It has the same inking and dampening arrangement as a regular press, and though the impressions are taken from a flat plate, the press running continuously, will have a chance to build up the ink on the plate and blanket, thereby approaching much closer the results that are obtained from the press run.

The paper plate and the plastic plate have a place with the lithographer on short runs and should be investigated by

(*Continued on Page 51*)

SAVE PRESSTIME, REPLACEMENT COSTS, AND PAPER.....

Surprising how much easier it is to make-ready properly with Mercury Rollers and Blankets. Because they are uniform and flawless, and because Mercury Blankets can be drawn taut and smooth without hurting their shape, you can do all your adjusting to compensate for variations in the form — not in the rollers and blanket. This equipment is easier to wash up, too. Moreover, Mercury rollers and blankets are so durable that you do not have to replace them as often as ordinary accessories — yet they cost no more. Their excellent performance also helps a good deal in reducing paper spoilage. It pays to equip with Mercury.

USE MERCURY PRODUCTS

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TIME FOR SEASONAL CHANGE TO RAPID WINTER COMPOSITION ROLLERS

D. M. Rapport
President

RAPID ROLLER CO.

Federal at 26th
Chicago, Illinois

EXECUTIVE ¶s

Herman Hiatt, for some time Eastern representative for Linograph Company, but more recently associated with C. J. O'Brien, Inc., New York, has been made production manager of the Burlington

Herman Hiatt

(Vt.) *Daily News* and the St. Albans *Messenger*. Henry Lux is the new head machinist for C. J. O'Brien, Inc., 400 Lafayette St., New York.

Fred A. White, manager of Linotype's Midwest agency, in Chicago, rounded out twenty-five years with the Linotype organization September 15. He is an all-round printer, and has worked in many cities in the United States, Canada and Central and South America. At various times he has filled the roles of Linotype operator, machinist, layout man, typographer and composing-room executive. When the United States entered World War I, Mr. White enlisted and served in the aviation branch of the navy. In 1919, he became a salesman and for a year represented the Linotype Company in Kentucky, before being transferred to the northern Ohio territory, with headquarters in Cleveland. In October, 1930, he was called in from the road and made sales manager of the agency, a position he continued to fill until early in 1934, when he was made assistant manager. Later the same year he was made manager of the agency.

Francis M. Britton, until recently, was production manager of the Nashua (N.H.) *Telegraph*. He now has a new position. He is general manager of the Revere (Mass.) *Journal* Publishing Co. He will also serve as assistant to Publisher Sidney Curtis. In addition to the *Journal*, the company publishes the Malden *Press*, Arlington *News*, East Boston *Times*, the *Yard Bird* (newspaper for the Portland, Me., shipyard), *Beehive* (newspaper for the Bethlehem, East Boston, shipyard) and numerous other publications. Mr. Britton is a member of the

Francis M. Britton

Typographical Union. He was one of the organizers and is a past president of the New England Daily Newspaper Mechanical Executives Association. He was active in the civic life of Nashua, N. H., where he organized and headed the emergency police force with a membership of 70. He is an amateur photographer and takes his hobby seriously. He is married and has two daughters, Sandra 7, and Bonnie 2. On Thursday night, September 21, a farewell party

(*Continued on Page 42*)

The plant that standardizes on the

CUSHMAN (OFFSET) MOTOR

stays out of trouble!

★ Parts Catalog and Instruction Book now available ★

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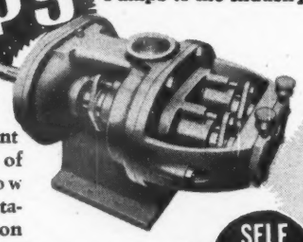
BUMP PUMPS

The Original Designer and Manufacturer who Introduced BUMP Pumps to the Industry



Positive dislacement type that is capable of operating at slow speeds without agitation, churning action or vibration within the pump. Bump Pumps have few parts so that maintenance is at a minimum. In use on printing equipment by many manufacturers. Bump Pumps deliver a constant volume per revolution that is not affected by speeds or pressures. Easy to install for any service. Consult our engineers on your pumping problems and your post-war plans. Information upon reques

SELF PRIMING

ONLY 2 MOVING PARTS

POSITIVE ACTION

SLOW SPEEDS

NO CHURNING ACTION

TAKE CARE OF THE PUMPS YOU NOW HAVE...

The BUMP PUMP CO.

LA CROSSE ★ WISCONSIN

Printing Patents . . .

Covering patents issued August 29, September 5, September 12, September 19.

This data is compiled exclusively for Printing Equipment Engineer by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading for the dates specified.

For copies of patents listed here, specify the patent numbers and send 10c for each separate patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,358,062. APPARATUS FOR BINDING PERFORATED LEAVES with paper combs having flexible fingers. The fingers have lateral slits near their ends which, when looped around, lock into U-shaped slits in the comb's back. The present device, for fastening the ends of the binder fingers to the slitted back by which they are held together after the fingers have been projected through marginal perforated leaves, includes a plurality of forks, one for each finger. Each fork is moved to engage its corresponding finger at its slit end and partly folding the finger end. The forks are then moved back relatively to one another until the forks with the folded finger ends project through the slits in the back. Forks are then withdrawn. Invented by Emil N. Farkas, Chicago, Ill. Assigned to Farkas Binding Trust, Chicago, Ill. Application April 20, 1943. 6 claims.

Composing Room Equipment:

2,356,959. DUPLEX RAIL ASSEMBLY ELEVATOR for linotype machine. The present arrangement facilitates casting slugs or lines of type which contain a combination of capital, italic, and bold face characters of which a portion must rest upon the lower rail and a portion upon the upper rail when fed into the assembling elevator. A retractable upper rail is provided. Matrices may be fed from the body of the machine onto either the upper or the lower rail of the elevator, and the matrices fed onto the upper rail may subsequently be dropped onto the lower rail without manual handling. Invented by Horace W. Wauson and Walter E. Bennett, Jr., Houston, Tex. Three-fourths assigned to Gulf Publishing Company, Houston, Tex., and one-fourth to said Bennett, Jr. Application November 17, 1941. 15 claims.

DESIGN 138,740. ORNAMENTAL DESIGN FOR AN ALPHABET of capital script letters. The letters are characterised by having open loops where there are upstrokes and downstrokes, as for example in the letter "M," and by having the cross-over points of the lines in these loops emphasized by very fine breaks in the lines, so that the uppermost line is continuous but the crossed-over under line is non-continuous and is broken by a narrow white space on either side of the upper line. Invented by Ceola P. Hayes, Santa Monica, Calif. Unassigned. Application January 29, 1944.

Feeding, Folding and Delivery:

2,357,202. PAPER WEB WINDING MACHINE having an adjustable counterweight means for its rider roll so that desired pressure can be applied on the roll being wound. Adjustment of the counterweight is accomplished by a sprocket having an adjustable block at its center for varying the eccentricity of the sprocket relative to its mounting. The degree of eccentricity controls the effective weight of the counterweight on the rider roll so it is not necessary to add or subtract weights in order to obtain the desired effective total weight. Counterweight effect on the rider roll is least when the winding operation is started and most when the roll of paper is completely wound, thus producing a uniformly hard roll of material by automatically compensating for the increasing weight of the material being wound. Invented by Lloyd Hornbostel, Beloit, Wis. Assigned to Beloit Iron Works, Beloit, Wis. Application July 8, 1942. 24 claims.

2,357,259. WEB ROLL SUPPORTING MECHANISM for newspaper and other high-speed printing machines. The present web roll reel has a gauge mounted on the mechanism and movable to simultaneously engage the ends of both the expiring roll and the next-following roll to indicate when an axial alignment adjustment is required. If the indicating pointer of the gauge does not register with an indicating mark to show alignment of the roll-ends at the point engaged by touching pads, then the spindle heads at each end of the new web roll may each be moved in the desired axial direction by means of handles to bring the pointer into register with the mark on the arm. Thereby even though web rolls are misshapen by having one end slightly concaved and the other end correspondingly convexed, they may have their web ends properly aligned with each other at the moment of splicing. Invented by Willam F. Huck, Richmond Hill, and William C. Wieking, Woodhaven, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application August 22, 1941. 23 claims.

2,357,821. HYDRAULIC WINDING MACHINE which is designed to assure that constant and proper tension be applied to a web of paper or thread during the processing. The rate of movement of mechanism for accelerating or decelerating a winding drum is regulated to a gradual movement to avoid breakage of the web. This patent is reported for its relevance to paper coating, as may be distinct from the paper manufacturing art, and also for the possibility that the hydraulic accelerating and decelerating control may be adaptable to printing press feed rollers as well as to a winding drum. Invented by Ferris T. Harrington and James Robinson, Detroit, Mich. Assigned to Vickers, Incorporated, Detroit, Mich. Application January 20, 1940. 5 claims.

2,357,976. WEB WINDING METHOD applicable to a wide web of newsprint stock immediately following its manufacture. Invention provides a method of transferring a moving flexible web that is running to a web roll being wound at maximum desired diameter, from that web roll to an empty core to start the winding of another web roll. The web contacts the core surface and adhesive is applied to the running web to stick it to core. A control actuator is applied to web adjacent the adhesive to control the severing of the running web between the core and the roll being wound by movement of such web-carried control actuator past a point such that the adhesive is in contact with the core surface. Invented by Oscar C. Roesen, Scarsdale, N. Y. Assigned to Wood Newspaper Machinery Corporation, Plainfield, N. J. Application May 19, 1943. 15 claims.

2,358,345. DELIVERY CONTROL for delivering sheets from a printing press. An endless carrier is used upon which the sheets are conveyed one after the other to a discharge point where they are discharged from the carrier above a pile support, one sheet being delivered upon each cycle of carrier. As the latter reaches the delivery point, it is withdrawn from supporting relation to the sheet so the sheet gravitates into position upon the pile and at the same time is controlled as it is being delivered so as to hug the trailing edge of the carrier as carrier is retracted. Invented by Andrew Neuhart, West View, Pa. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application May 21, 1941. 17 claims.

(Continued on Next Page)

When Our Boys Come Home . . .

Among the pleasant surprises in store for our boys on their return to their jobs in the engraving shops, will be the improvements made in A-Z Alloy and Zomo Electric Zinc.

First, the Machine Cut Finish, with its positively controlled evenness of surface and depth of tooth, eliminating the necessity of the old pumice rub down to remove the ridges and scratches they had to cope with before the War.

Second, the improved plastic Backote, which will save them the muss and fuss of applying and removing asphaltum like they used to do.

Of course, the metallic structures and etching qualities of Zomo Electric Zinc and A-Z Alloy are always right because of the Electric Induction Furnace Melting Control.

For the best of service order Zomo Electric Zinc and A-Z Alloy from your regular metal supplier.

ZOMO ELECTRIC ZINC ◆ A-Z ELECTRIC ALLOY

(Continued from Page 37)

Miscellaneous:

Reissue 22,547 of 1,969,106. ADHESIVE APPLYING AND REGISTERING MECHANISM for affixing flexible sheets of thin material, such as paper labels, glassine envelope windows, Cellophane inserts for cartons, etc., in precise position. The area and configuration of application of adhesive can be accurately controlled, varied, and placed on a blank exactly where required. Invention is an improvement on the general type of mechanism shown in patent 1,314,988 of September 2, 1919. A web of the thin material is severed in proper length sheets while a continuously moving surface acting by slipping friction, holds the thin material under continuous tension. Disks "turned" on shafts extend the width of the gluing surface and slightly above the work line of a curved glue plate so that they need not be adjusted for thin or thicker stock and, during non-feeding, adhesive will not pass to the disks and hence will not get on the under side of the stock. Invented by Edwin G. Staude, St. Paul, Minn. Assigned to E. G. Staude Manufacturing Company, St. Paul, Minn. Original application October 31, 1930. Application for reissue June 17, 1944. 44 claims.

2,356,873. COATING APPARATUS which may be either a separate unit or used in a continuous operation in step with the making of paper. Two important features are provided; first, by stripping the coating from the applicator roll a comparatively abrupt separation of the web surface from the applicator roll surface is brought about and in addition a greater quantity of coating material can be applied to the web surface per mass, and second, the coating carried by the web is smoothed before the fibrous web has an opportunity to absorb the liquid portions of the coating material, i.e., before coating partially sets or loses a portion of its mobility. Invented by Gerald D. Muggleton, Appleton, Wis. Assigned to Consolidated Water Power & Paper Company, Wisconsin Rapids, Wis. Application January 27, 1941. 2 claims.

2,356,999. FACSIMILE SCANNER DRUM of the type used to hold a sheet of copy which is to be scanned, for transmitting purposes, by a narrow-focused beam of light reflected from the copy to a photo-electric cell. The present invention relates to the method of holding the copy tightly against the drum so that the point of scanning light may be maintained in focus. This is accomplished by having a transparent sheet permanently clipped to the drum along one edge and arranged with a securing strip at the other edge so that the copy may be held on the drum by pulling the transparent sheet tightly over it. The sheet may be colored to act as a light filter. For instance, a yellow color makes underlying blue copy appear blacker, and green similarly improves the appearance of red copy. Invented by John V. L. Hogan, Forest Hills, N. Y. Assigned to Faximile, Inc., New York, N. Y. Application September 29, 1941. 5 claims.

2,357,640. COMBINATION GRINDER AND HOMOGENIZER which may be used in preparing inks, paints, emulsions, etc. The apparatus mechanically grinds and hydraulically shears matter and violently mixes liquid and ground matter. It may be stationary equipment or portable; used vertically or horizontally. An electric motor operates a combination grinding and turbine instrumentality which is at the end of a framework held by a bridge plate serving as guide for framework and as means for attaching the device to any container. Invented by Edwin G. Eppenbach, Manhasset, N. Y. Unassigned. Application April 7, 1942. 6 claims.

Plate Making:

2,356,946. PLATE WHIRLER for evenly distributing and drying a wet coating on the surface of a flat photo-engraving plate. A circular table has clamps for centrally locating and holding a plate. The table is whirled by a motor and gradually brought up to speed by a friction drive. Excess liquid is driven off the plate centrifugally and the remainder is evenly distributed over the surface and dried under influence of the whirling action and of electric heating coils. Invented by Frank T. Powers, Glen Cove, N. Y. Unassigned. Application January 3, 1942. 7 claims.

2,356,960. CAMERA with a horizontal track system and regulating arrangement to cause relative movement of the respective supporting carriages for the light-sensitive member and the copy board or equivalent; also for effecting movements of each of these carriages with respect to the objective lens of the camera. By the novel mechanism, the camera copy board or a frame carrying a positive or negative plate are maintained alternately in the same focal plane. These accurate shifting movements are accomplished through hand wheels which may be turned by an operator remaining in one position without himself moving. Invented by Stephen N. Wekeman, Saddle River Township, Bergen County, N. J. Assigned to General Printing Ink Corporation, New York, N. Y. Application August 21, 1941. 20 claims.

2,357,388. METHOD OF COLOR CORRECTION for multilayer negative film in the production of subtractively colored negatives. Correction printing masks are used for the multi-layer film having silver halide emulsions containing color formers and being respectively sensitized to the blue, green and red regions of the spectrum. The multi-layer film is exposed to a colored object and is color developed. Present improvement comprises re-exposing at least one of the green- and red-sensitive layers of film and developing it in a developer incapable of coupling with the color formers in the layer, but capable of producing silver and stained images of a yellow to brownish-yellow color. Invented by Herman H. Duerr, Herbert W. Morreall, Jr., and Harold C. Harsh, Binghamton, N. Y. Unassigned. Application November 6, 1942. 14 claims.

2,357,476. MANUFACTURING OF PRINTING FORMS by a device which uniformly coats printing cylinders with a light-sensitive colloidal coating. The container has the shape of a channel, i.e., it is a narrow box with upper side open, so only a narrow area of the printing cylinder contacts the coating fluid at one time. Spreading of the fluid is then obtained by rotating the cylinder. The supporting means cooperate with means for rotating the cylinder around its axis, the cylinder being supported with its axis extending in horisontal direction while the coating takes place. Invented by Robert Kaulen, Loevenich-Cologne, Germany. Assigned to the firm of Eden A. G., Zug-Zurich, Switzerland. Original application June 3, 1937; divided and this application February 28, 1941. 4 claims.

2,357,624. CINEMATOGRAPHIC METHOD which is said to be applicable to all forms of photographic media, whether camera prints, photographs, half tones or line cuts, made by any reproductive process such as relief, planographic or intaglio printing. After film has been taken, negative is edited and cut, and final "picture positive" is produced in the usual manner. A master negative is then made. "Verges," or circumscribed outlines, are introduced after the "picture positive" has been completed and prior to the making of the master negative or at the same time as the master negative is made. This retouching is designed to give depth to the picture. Invented by Leon H. Amdur, Brooklyn, N. Y. Unassigned. Application October 10, 1939. 48 claims.

2,357,938. CONTROLLED INTERMITTENT ILLUMINATION for use with photoelectric scanning machines such as used in the reproduction of "structured" negatives for halftone printing. Object is to assure that dot structure will be clear and sharp, in regular formation, and not fuzzy or smudged. The light source consists of a regularly timed electric spark and a light valve between the spark and the photosensitive film. Invented by Edward C. Dench, South Orange, N. J. Assigned to Interchemical Corporation, New York, N. Y. Application November 25, 1941. 16 claims.

2,358,189. ENGRAVER'S GUM, useful for color registry printing, which is designed to increase resistance to stretching, to provide uniform flexibility and to prevent migration of vulcanizing ingredients. The backing comprises a non-stretchable layer of semi-hard composition containing a vulcanizing ingredient and unwoven fibers, and a barrier layer of soft rubber composition low in sulfur content interposed between the impression layer and backing to retard the migration of vulcanising ingredients from the backing layer to the impression layer. Invented by Edward A. Sprigg, Wadsworth, and Edgar O. Macy, Cuyahoga Falls, Ohio. Assigned to The B. F. Goodrich Company, New York, N. Y. Application August 1, 1940. 4 claims.

2,358,590. STRIP FILM, for photoengraving, which eliminates or reduces the finishing operation required for the production of halftone photoengravings. It includes a sil-

"SAVES TIME AND HEADACHES"
in shaving all flat work

So report users of Plane-O-Plate Rotary Shavers in national survey

"For fast, accurate shaving of all flat work to uniform printing level, a Plane-O-Plate Rotary Shaver is one of the *best* investments we've ever made."

This assertion, strong though it is, generally expresses the opinion of hundreds of users of Plane-O-Plate Shavers. This was learned in a recent national survey made in August, 1944.

Here are advantages the printing industry appreciates:

Shaves Full Bed of Plates in 30 seconds. Handles electros, stereos, wood-base and stero-base cuts, type, etc.

Speeds Up Printing by saving time usually spent in underlaying. Cuts costs.

Reduces Plate Wear, prolongs life of press blankets by leveling flat work. Shaves from "zinc" to above "type high."

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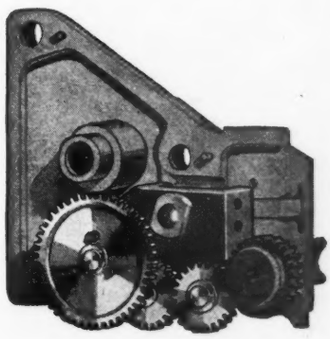

- Eliminates Jumping of Matrices —
- Reduces much of the toe wear —
- Cuts out many transpositions —

This simple unit can be applied in a few minutes, without drilling or tapping to your Linotype Assembler Casting.

★ ★ ★

Its built-in lubrication system really lubricates! Gladly sent on approval.

Part No. M6-S—Slow Speed Unit (Reduces Star Wheel Speed by ½).....$13.75

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(*Note*—Either Unit may be changed from one speed to the other at any time by changing two Gears, at a cost of $2.50.)

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THE KID GETS A NEW OUTFIT—OLD LECTURE

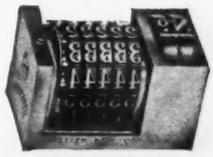
Dear Pop:

Here's my old familiar scrawl again—no more dictating from a field hospital bed. I returned to my outfit last week "just as good as new"—thanks to the fine treatment I got plus the "outside help" I got from that blood plasma. I hope the fellows in the shop took me up when I suggested they help this worthy cause by donating blood to the Red Cross Blood Bank.

When I returned to duty I got a complete new outfit —for personal use—to make life sour for the Krauts. And along with it the old lecture on how and why to take good care of it. Every time we have inspection I get thinking of the shop and how we should adopt such a system when I get back—especially for our numbering machines. They should be cleaned and oiled after every job, and then put away carefully—ready for instant use.

I can't tell you too much, but you must have read in the local papers that we are doing O. K. Tell the boys I'm waiting for a report on their blood donations.

The Kid



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Wetter Rotary
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AMERICAN TYPE FOUNDERS

6244

ver halide emulsion sensitized to light of wave lengths longer than 5500 A. supported on a layer colored with a fast coloring material to transmit most of light of a wave length shorter than 5500 A. and to absorb most of light of a wave length longer than 5500 A. A colored base is provided on which the layers are adherent for easy detachment. The base absorbs most of wave length shorter than 5500 A. Invented by Frank T. Powers, Glen Cove, N. Y. Unassigned. Application October 10, 1941. 4 claims.

Printing Inks and Related Chemicals:

2,356,740. MORDANT DYESTUFFS AND A PROCESS FOR THEIR MANUFACTURE. The dyestuffs are especially suitable for chrome printing and all of them are more or less resistant to reducing agents, being useful for colored discharge printing. A material obtained according to the process of prior patent, 2,048,283, is reacted with the nitroso compound of a body of the benzene series containing besides the nitroso-group an OH- and a COOH group in ortho-position to each other in a suitable solvent or diluting agent, in the presence of an acid. The new dyestuff is a red-brown powder, which gives red-violet shades when dissolved in water. Invented by Karl Glenz and Frans Neitsel, Basel, Switzerland. Assigned to the Swiss firm of Durand & Huguenin, A. G., Basel, Switzerland. Application April 21, 1942. 7 claims.

2,356,794. RESIN EMULSION VEHICLE with which improved printing pastes are made by incorporating an organic solvent soluble and substantially water insoluble cellulose ether, such as ethyl cellulose, into the water-insoluble resin or resins and using this blend instead of the resin alone. Fabrics printed with the compositions are said to possess a marked resistance to crocking, either wet or dry, and their washfastness is said to be excellent. Invented by Alfred L. Peiker, East Bound Brook, N. J. Assigned by mesne assignments to American Cyanamid Co., New York, N. Y. Application January 21, 1939. 4 claims.

WILLIAM KURTZ
MAKES THREE-COLOR HALFTONE 1893

2,357,073. ADHESIVE COMPOSITION. A glycol ester of a rosin having a drop melting point within the range of 25-80° C. is used as a plasticizer for water-soluble film-forming materials, such as starches, sugars, casein, bean flour, etc. The adhesive may be used in the printing industry and in coating paper, as well as textiles. Invented by Wyly M. Billing, Wilmington, Del. Assigned to Hercules Powder Company, Wilmington, Del. Application November 27, 1940. 15 claims.

2,357,187. PROCESS FOR THE MANUFACTURE OF HYDROPHILIC POLYMERIZATION PRODUCTS OF THE SUPERPOLYAMIDE TYPE. Example: 70 grams hexamethylene diammonium sebacate (2 mols) are thoroughly mixed with 30 grams glycocolethylester hydrochloride and heated after careful displacement of the air by carbon dioxide in a carbon dioxide atmosphere at 190°-200° C. for 17 hours. The clear melt solidifies after cooling into a red-brown resin. In the heat it is clearly soluble in water with dark red color. The solution solidifies into a clear paste after cooling. This high polymeric condensation product is suitable as textile auxiliary agent, as diluent for printing inks and similar purposes. Invented by Max Hagedorn, Dessau, Germany. Vested in the Alien Property Custodian. Application September 5, 1940. 2 claims.

2,357,226. STABILIZED DIAZO PRINTING PASTES which contain, in addition to the diazo salt and the paste-forming ingredients, an aryl carboxylic acid, or a soluble metallic salt, such as an alkali metal salt. The acids and their salts may be added to any ingredient of the paste prior to incorporation, or may be mixed with the finished paste. The pastes are said to keep their strength longer, and not to deteriorate so swiftly. Invented by Swanie S. Rossander, Chiles E. Sparks, and Carl W. Maynard, Jr., Wilmington, Del. Assigned to E. I. du Pont de Nemours & Company, Wilmington, Del. Application December 29, 1943. 4 claims.

2,357,296. IRON BLUE PIGMENT which is alkali-resistant and useful in printing inks and coating compositions. It is made alkali-resistant by the addition of a non-basic nickel phosphate compound which is preferably added to oxidized ferric ferro-cyanide after final washing and initial dehydration. The nickel compound may be prepared by reacting nickel sulphate and sodium phosphate. Invented by Alfred E. Van Wirt and George F. Jones, Glens Falls, N. Y. Assigned to Imperial Paper and Color Corporation. Glens Falls, N. Y. Application November 14, 1942. 12 claims.

2,357,317. AZO COMPOUNDS for textile materials which can be colored therewith by dyeing, printing or stencilling, with an aqueous suspension formed by grinding the dye to a paste in the presence of a sulphonated oil, soap, or other dispersing agent. An example of the preparation of the dye is: 1-amino-2-hydroxy-4-nitrobenzene is diazotized, and the diazonium compound obtained is coupled with 3-methyl-6-methoxyphenol-N-sodium-beta-sulfonic-ethyl-N'-ethyl-methylhydrazine. The dye obtained yields pinkish-rubine shades. Other colors may be obtained by using different ingredients of the same general class. Invented by Joseph B. Dickey, Rochester, N. Y. Assigned to Eastman Kodak Company, Rochester, N. Y. Application September 23, 1941. 6 claims.

2,357,594. POLYHYDRIC ALCOHOL ETHER ESTER of hydroxyacetic acid is prepared by heating in contact with an alcoholysis catalyst a hydroxyacetic acid ester of a lower aliphatic alcohol with a polyhydric alcohol ether containing a free hydroxyl group. The esters are useful for many purposes, including the preparation of printing pads of all types, as penetrating agents for printing paste, and as major ingredients in preparation of inks for printing paper, textiles and wood. Invented by Donald J. Loder, Wilmington, and Wilber O. Teeters, Roselle, Del. Assigned to E. I. du Pont de Nemours & Company, Wilmington, Del. Application June 14, 1940. 15 claims.

(Printing Press Patents for this issue will be published in the November issue.)

AUTHORIZED REPRESENTATIVES

CHICAGO:
Chemco Photoproducts Co.
NEW ORLEANS:
Chemco Photoproducts Co.
ST. LOUIS:
Mid-West Photo-Eng. Supply Co.
WASHINGTON, D. C.:
E. H. Walker Supply Co.
RICHMOND, VA.:
E. H. Walker Supply Co.
BOSTON:
Allan B. Croke Co.
BUFFALO:
C. S. Illingworth
DETROIT:
R. L. Porter
CINCINNATI:
G. C. Dorn Supply Co.
AKRON:
Metzger Photo Supply Co.
SAN FRANCISCO:
J. W. Feinstein
ATLANTA:
Chemco Photoproducts Co.

Thompson-Hayward Chemical Co.
DENVER, MINNEAPOLIS, TULSA, WICHITA, MEMPHIS, DALLAS, OMAHA, KANSAS CITY, OKLAHOMA CITY, DES MOINES, HOUSTON, SAN ANTONIO

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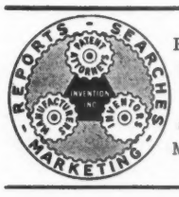

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D. C.

Court Sustains Interchemical's Patent

On August 23, 1944 the United States Circuit Court of Appeals in New York decided in Interchemical Corporation's suit against Sinclair and Carroll Co., Inc., that Interchemical Corporation's patent 2,087,190, on its IPI Division's Vaporin inks, is valid and has been infringed by Sinclair and Carroll. The decision reversed a former judgment against Interchemical entered on July 7, 1943.

According to an executive of Interchemical Corporation, the litigated patent covers formulations used for the fast-drying inks which made possible the modern production speeds of many national weeklies and other publications. With former conventional inks letterpress web printing speeds rarely reached 400 lineal feet a minute. With Vaporin inks speeds up to 750 feet a minute and better are attained. The ink impression is dried instantly on the surface instead of being partially absorbed into the paper. IPI Vaporin inks are also used in printing large mail order and other catalogs, bags and many other kinds of printed material.

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- ☐ SERVICED BY PLUS PLAN
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There is one ticket you can vote straight and be sure of electing a winner . . . and that is the Imperial Plus Metal ticket. Voting this ticket means switching to Imperial Type Metal and the Plus Plan. It's a sure way to make certain of the best in type metal and type metal service.

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MORLEY TRUTONE MATS ARE TOPS HERE, TOO!

MORLEY TRUTONE MATS

THAT'S right . . . Morley Trutone Mats are molded at the Concord, N. H. Monitor Patriot, and plates made from these are used in the printing of the Reader's Digest Egyptian Edition. You can recognize the quality of Morley reproduction anywhere... for Morley Trutone Mats, made to meet individual requirements, give clear-cut printing and maximum value in illustrations.

THE MORLEY COMPANY

PORTSMOUTH, NEW HAMPSHIRE

WE ARE PROUD TO ANNOUNCE THAT OUR "E" FLAG NOW CARRIES A WHITE STAR FOR CONTINUED MERITORIOUS SERVICE ON THE PRODUCTION FRONT

EXECUTIVE ¶s

(Continued from Page 36)

was tendered Mr. Britton by his friends in Nashua. Mayor Eugene Lemay and numerous other public officials were present to pay tribute to Mr. Britton. He was presented with a wrist watch and numerous other gifts.

George Nehrbas, stereotype-pressroom foreman of the Fremont (Neb.) *Tribune*, passed away at his home in Fremont, Neb., on August 4.

Richard M. ("Dick") Seymour has joined the staff of the Linotype Company as a production engineer and is now covering the twenty-nine counties in eastern New York state formerly covered by B. H. Jungman. (Mr. Jungman has been transferred to Linotype's New York sales agency). Seymour formerly was mechanical superintendent of the Schenectady (N. Y.) *Union-Star* and the Atlanta (Ga.) *Journal* and composing room superintendent of the Rochester (N. Y.) *Democrat* and *Chronicle*. Also, he was president of the Graphic Arts Press, Inc., of Rochester. He is a member of the International Typographical Union.

Richard M. (Dick) Seymour now represents Linotype in Eastern New York.

C. A. Hanson, vice president in charge of works, who has been with the Linotype organization more than 25 years, has been succeeded by George W. Allison, vice president and assistant works manager.

Easily Manipulated

BURGESS Chrome Mats are easily manipulated, too! The fast, free release and uniform quality assure stereotypers of a mat they enjoy working with.

Not only that, but Burgess Chrome Mats reproduce the finest of serifs in the most minute detail. These are qualities that cause stereotypers to choose Burgess Chrome Mats for their work.

If you are not using Burgess mats try them today . . . and see the difference.

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BURGESS Chrome MATS

This Advertisement printed from plate made from a Burgess Supreme Tone-Tex Mat.

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Pacific Coast Representative
RALPH LEBER CO. 426 Polson Bldg. SEATTLE, WASH.

PRODUCTION

(Continued from Page 14)

Class of Work	M. R. (hrs.)	Time Per M. (hrs.)	T'l Hrs. 10M
Ordinary (cheap)...	.8	.29	3.7
Medium....	1.5	.31	4.6
Good.....	2.1	.34	5.5
Superior....	2.8	.37	6.5
Troublesome	3.7	.41	7.8

For the small forms, the makeready time would range from .3 hr. to 1.6 hrs. The makeready time for form sizes between the minimum and maximum would range between the extremes given above.

The running time varies with the thickness of stock. The highest production is obtained with stocks of normal thickness, 0.003 in. to 0.0055 in. For work classified as "good" (average) we can expect approximately 3000 per hr. (.34 hr. per M). For the heaviest stocks (.18″) and the lightest stocks (.0015″) we can expect only slightly over 2000 per hour. (Thinnest papers, 144 hr. per M; thickest cards, .47 hr. per M).

Thus, it will be evident that production expectancy for a given press can be of value only as it applies to the specific job or the average for the individual shop. It varies considerably with form sizes, stock thicknesses, and classes of work. The production data applicable to one job or one shop is not applicable to another job or another shop.

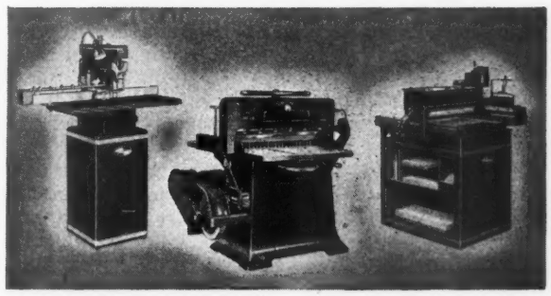
We would suggest that it will likely be far more profitable to consider those things which increase makeready time, decrease production, interfere with desired quality and increase waste. Even if we know production is not up to a reasonable standard, we must still find the causes and remove them. With average pressmen, machines, and material, in good condition and reasonably good management, we know that we will reach or pass any reasonable production standards.

We acknowledge with thanks the assistance of the *American Pressman* in compiling this data.

NO KID GLOVES NEEDED

to handle

CHALLENGE EQUIPMENT



But—FOR THE DURATION IT'S PATRIOTIC TO MAKE IT LAST by regular lubrication, inspection and the replacement of worn parts before breakdown occurs.

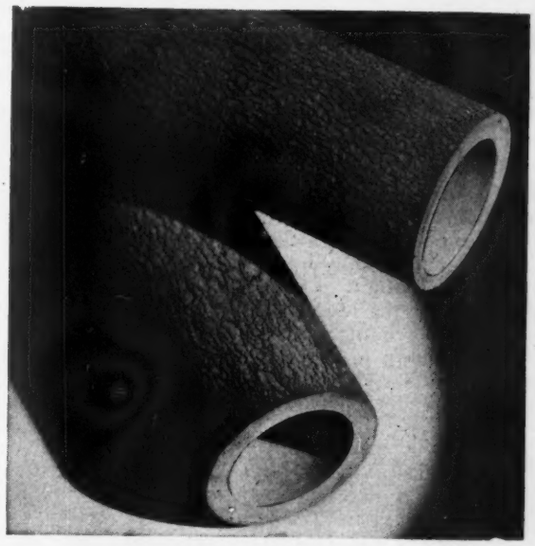
RIGHT NOW—as is fitting . . . UNCLE SAM has first call on Challenge facilities . . . However, we are filling orders for replacement parts to keep Challenge Machinery in production. Some equipment we can supply from stock. Write us your needs—perhaps we can help you.

492

BACK THE ATTACK . . . . BUY MORE WAR BONDS!

THE CHALLENGE MACHINERY CO.

Main Office and Factory: GRAND HAVEN, MICH. 1893 50th ANNIVERSARY 1943 Eastern Sales Office: 50 Church St., NEW YORK



LINE-COMPOSING MACHINE KEYBOARD PERFORMANCE

Is dependent upon clean condition of the keyboard parts, properly lubricated cams, and keyboard shaft rolls. Particularly, the rolls should grip the cams instantly in response to the touch of the keybutton by the operator. *Booth's Black Rubber Rolls* are dependable. Operators and machinists like them for that reason. We are still able to supply these fine rolls. The roll with the persuasive cam turning property. Try a pair at $1.45. Per dozen rolls, $7.75.

BOOTH'S ZINK CUT CEMENT

Fastens all kinds of cuts to wood or metal base. Relieve yourself of the worry caused by lost or misplaced cuts. Have them positioned in the form just as is indicated in the layout. Prices in the United States: 75c per tube; $6 per dozen tubes; $5 per dozen tubes in gross lots.

THE E. A. BOOTH RUBBER COMPANY

364 ROCKEFELLER BUILDING • CLEVELAND, OHIO

Equipment and Supplies . . .

Single and Multi-Color Offset Press Announced

INITIAL announcement of a single and multi-color offset printing press has been made through the medium of a sound motion picture by the Miehle Printing Press & Mfg. Co. The press will be offered upon the resumption of the manufacture of printing machinery.

The press shown in operation in the moving picture is a 42 in. by 58 in. two-color, but due to the unit type of construction single and multi-color models with identical printing units will be available. Several basic improvements are incorporated in this new Miehle offset press in feeding, registering and delivering the sheet. The press prints in register at a speed of 6500 r.p.h. The sheets are stream-fed by a new Dexter feeder, utilizing only air for corner separation and featuring simple and rapid adjustments.

Manufacturer explains that by extending the stream feeding principle to the registering process, and registering one sheet while the preceding sheet is still being removed from the feed table an exceptionally long time is provided for register. This also permits reduction of the size of the gap and of diameter of the cylinders and consequently their surface speed is much lower at a given number of impressions per hour than that of cylinders with a larger gap and diameter.

It is also stated that improvements in delivery design have overcome the problems of delivering large sheets of paper at high speeds and the pile is so accurately jogged on all four sides that it looks as if it had just come from the trimmer.

Miehle announces that it has concentrated on simplicity of adjustments not only for the convenience of the operator but for quicker makeready and greater production. Among the features are: (1) Simple adjustment of front lay; (2) Adjustment of impression cylinder pressure without a wrench; (3) Improved inking distribution with quick roller settings; (4) Improved water motion, with water level maintained by continuously operating pump; (5) Crank and worm gearing for lowering and raising ink fountain blade; (6) Ample working space between units; (7) Low operating height; (8) Large cylinder journals supported by heavy duty, pre-loaded roller bearings, and (9) Modern automatic lubrication.

Metaplast Silver Coating Process for Electrotyping

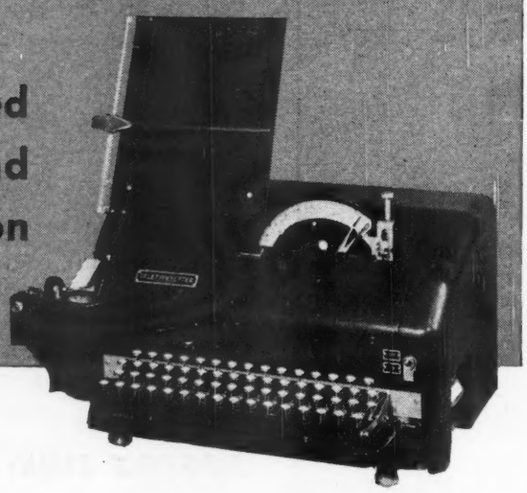
CHARLES FRITSCHI of Stereotex Machinery Co, announces that his company has been made sole distributor for the electrotype industry of the Metaplast process for silver coating plastic electrotype molds The process, as applied to electrotyping, is a method of chemically depositing a fine silver coating on a plastic mold surface to render it conductive for the electrolytic deposition of copper, nickel, iron or other metal

The entire equipment consists of: (1) Three glass, enameled, or stainless steel trays of a size suitable for the largest molds to be treated, and (2) A suitable number of cases made of an inexpensive, acid-resisting, non-conductive composition permitting rapid fastening of plastic molds with industrial tape, and of sufficient weight to prevent swinging in the tank. If preferred, cases may be dispensed with entirely by using a suitable number of special contact-clamp-and-hooks sufficiently substantial to prevent heating up and swinging in the tank. The plastic molds may be clamped either singly or in pairs back to back.

Claims made for the Metaplast process are (1) Time required for the entire silver coating process is about 3 min, but in continuous production molds can be silvered at the rate of about 1 per min. (2) The plating time is reduced by about 20 min. because deposition of copper or nickel commences over the entire mold surface immediately after the mold is placed in the plating tank. (3) The film

MULTIFACE PERFORATOR

Ready to speed your book and job composition after the war!



As its name implies, the *Multiface Perforator* handles the punching of tape for many text faces – Bodoni, Caledonia, Garamond, Vogue, Scotch and other popular faces, in sizes from 5 to 14 points. It is the world's fastest composition keyboard for book and text matter.

The Multiface Perforator can be quickly adapted to count and justify most of the fonts run on standard machines. After the tape is punched, you place it in the *Teletypesetter Operating Unit* – and let the composing machine turn out the slugs automatically.

The Teletypesetter method provides speeds far above those possible with manual operation – keeps composing machines running continuously – increases output from fifty to one hundred percent – cuts composition costs nearly in half.

In the past six years, the *Multiface Perforator* has proved its worth in a number of commercial plants. While it is not available for you today, it will be within a short time after our war job is done. For full details *now*, write to TELETYPESETTER CORP., 1400 Wrightwood Ave., Chicago 14, Illinois.

Buy all the War Bonds you can—and keep all you buy!

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REG. U. S. PAT. OFFICE

WE CAN'T FURNISH ALL OF THE NEWSPAPER SUPPLIES

No we can't begin to furnish all of the newspaper supplies used in this country. But we can and do furnish the best. That's why our list of customers reads like the "Who's Who" among newspapers. Perhaps your plant is one of the few who have not tried Eastern Newspaper Supplies. To break the ice, we suggest you try an order of

"FLECTO" Gummed Backing Felt

"FLECTO" Gummed Backing Felt is packedi n individual containers of 5 sheets each, for convenience in handling.

"FLECTO" gummed backing felt is a product of modern chemical research. It is of finest quality, both in the felt and adhesive, and is sold on a money-back guarantee.

HERE ARE "FLECTO" FACTS!

It will stick fast, on any mat, regardless of heat used in scorching. Its adhesive will not crack, peel, slip or crystallize.

It tears easily and cleanly, without ragged ends.

Its gauge is uniform throughout and all "Flecto" is gauged accurately.

"FLECTO" felt is well bonded throughout and will not peel or separate in layers.

It is soft and pliable, assuring conformity to the mat and easy shrinking with the mat. Hundreds of users say "THERE IS NO BETTER BACKING FELT MADE."

SPECIFICATIONS

ADHESIVES—The special adhesive applied to "Flecto" is scientifically formulated to hold fast on all types of dry mats. Climatic conditions will not affect it.

FELT — This felt is produced under rigid control so that it is uniformly soft and porous, to permit the quick and easy escape of steam.

GAUGES AND SIZES

Gauges .021, .025, .030 (Green) sheeted 18" x 24".

Gauge .035 (Red) sheeted 18" x 24".

Gauges .040, .045 (Green) sheeted 18" x 22".

Gauges .050, .060 (Gray) sheeted 18" x 22".

Cut into strips 9" or 18" long and ⅛" to 1" wide at no extra charge.

9603 Northern Blvd. **EASTERN NEWSPAPER SUPPLY** Corona, N. Y.

of silver deposited on the sensitized mold surface is continuous, is uniform, and of minimum thinness. Deposition takes place over the entire mold surface immediately after the mold is placed in the plating tank. The shells are of uniform thickness throughout without pin or side holes.

The sequence of steps for silvering plastic molds is as follows: (1) The mold is thoroughly cleaned with alkaline cleaner or alcohol; (2) The mold is clamped upon glass-top table and is sensitized by means of a soft brush dipped in a sensitizing solution H-12. (3) The mold is rinsed with clean water. (4) The mold is placed for about 10 sec. in a tray containing silver solution L-15 and excess solution is drained off. (5) The mold is placed for about 1 min. in a tray containing reducing solution N-16. This operation deposits a continuous film of silver on the sensitized mold surface. (6) The mold is rinsed in clean water. (7) Mold is taped to case, a contact clamp is attached and hung in the plating tank. (8) After the shell thickness has been deposited, the case is removed from the tank and the shell is released from the mold. (9) The face of the shell is dusted with French chalk to prevent adhesion of backing metal. The shell is backed in the usual way.

If you are interested in further details respecting the Metaplast process *Printing Equipment Engineer* will be glad to transmit your request to Stereotex Machinery Company.

Comfortaire Conditioner

A NEW Amcoil Unit called Comfortaire Conditioner, has been announced by American Coils Co. This is a wall type air conditioner. It is claimed the unit will remove up to 90% of the latent heat (humidity) with adjustable heat (temperature) control. Manufacturer

View of Comfortaire Conditioner wall type air conditioning unit. Is claimed to remove up to 90% of latent heat. Dimensions of Model WCA25 are: 33 in. wide; 34½ in. high, and 16¼ in. deep.

also claims it produces air conditioning without cold, damp effect. Reheating equipment is unnecessary and operating cost are economical.

Comfortaire Conditioner is designed for printing plants and paper storage rooms, photographic studios, drafting rooms and other industrial uses. It operates automatically. It is controlled by a humidistat temperature control and a solenoid valve. The condensing unit is set to defrost automatically on each off-cycle. Since the air entering and leaving the unit bypasses the cooling coil, dehumidification is accomplished without appreciable loss of temperature. If desired, cooler temperatures may be obtained by a slight manual adjustment.

Two sizes are ready for delivery (on AA5 or L-38 ratings). Product bulletins for size, construction, operation and capacities are available. If you are interested, *Printing Equipment Engineer* will gladly transmit your request to manufacturer.

New Small Pur-O-fier

A NEW small Pur-O-fier designed to eliminate free moisture, oil and all foreign matter with a heavier specific gravity than air from passing through the compressed air line has been developed by the Bird-White Company.

One of the specific applications is for compressed air units for offset spray devices.

Known as the Model A-1 Pur-O-fier this new unit uses positive centrifugal action as a medium for purification. It operates with from 1 to 5 cu. ft. of air. A unique feature of the unit is that it weighs 1¼ lbs. and is 3⅛ in. diam. by 5⅝ in. deep including plastic and transparent entrainment sump. No maintenance is

required on the unit other than draining the sump which can be easily accomplished by opening the petcock in the bottom. Standard units have ⅛ in. female pipe connections for intake and discharge pipes. It is ball-bearing equipped. All parts of the Pur-O-fier subject to corrosion are plated.

The new Model A-1 Pur-O-fier can be used for the following applications: (1) Air-operated heating controls; (2) Air-operated gauges of the precision and checking type, and (3) Air-operated cleaning devices on machine tools to protect them from corrosion, gumming due to moisture or oil and dirt contamination.

Additional information on Model A-1 Pur-O-fier may be had by writing Bird-White Company direct or in care of *Printing Equipment Engineer*.

On Molded Rubber Plate Equipment

By HERMAN A. SLATER

RECENTLY, we have had inquiries respecting the materials and equipment needed for making resilient molded rubber plates. Part of the requests for information refer to the price range at which the equipment may be secured. In making up a tentative list, we quote pre-war prices.

Molding press	$700 to $6000
Cutting and shearing equipment	1 to 300
Measuring equipment	1 to 175
Plate mounting equipment	to 2000
Bench space	10 to 250
Proving equipment	to 3000
Auxiliary tools, etc.	10 to

No curving equipment is needed for rotary presses.

With such a wide price range from which equipment may be selected, it is apparent that without previous knowledge of the capacities and abilities of the equipment, and without experience in determining the suitability of these factors to the nature and volume of work to be done with molded plates, it is possible to over-invest or under-invest in equipment.

Engineering service is available from manufacturers now for post-war needs to see that such investments are properly made.

Much of this equipment can be utilized in the manufacture of thermosetting plastic plates.

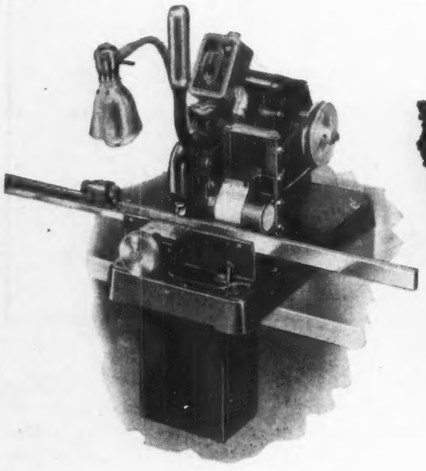
In referring to the materials most suitable for mounting resilient molded rubber plates, the observation is made that these plates will print substantially better if mounted on metal, plastic, or some other unyielding surface. However, copper and brass should be avoided because of the chemical action of the chemical two metals which hastens the deterioration of rubber. Unless specially processed or treated, wood should be avoided entirely. It is essential that a "kiss" impression be applied in printing from molded rubber. Therefore, wood that is warped or swelled will cause distortion in the print and will hasten premature wear of the plate.

Unusual effects in backgrounds may be obtained without using a metal pattern. The substitute patterns are window screen, burlap, tapestry, forms of type characters or border material, or any material that will leave an impression in the hot wax-like matrix. As soon as the plate has been molded and mounted, further enhancements may be obtained by cutting the plate to some definite design. Benday material can be secured in finished form and hand-cut to the desired design or pattern.

Portfolio Available for Inspection

As an extension of its factual current campaign *To Help a Business Man Make a Business Decision*, American Type Founders announces it is launching a program to give business men-printers the complete facts on offset-lithography.

The drive was opened the last week in September with a mailing piece sent to every printer in the country. It points out the things offset is used for and the basic reasons why it is used. The printer is invited to ask to see a portfolio which is a compilation designed to inform the letterpress printer about all phases of offset-lithography. The portfolio may be inspected by getting in touch with American Type Founders direct or through any of its branch offices.



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Vertical Miterer

Cuts 700 accurate miters an hour direct from strip material. Priced for the small plant. Efficient for the large plant.

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If you have already made a decision on your Rouse Miterer, you can insure preferential delivery by placing your order now.

The return of competitive conditions will make this a good investment—and waiting time can be costly.

The Rouse Vertical Miterer will be essential equipment in every composing room. If you do not have the facts on the latest Rouse Vertical Miterer, you should send for full information now.

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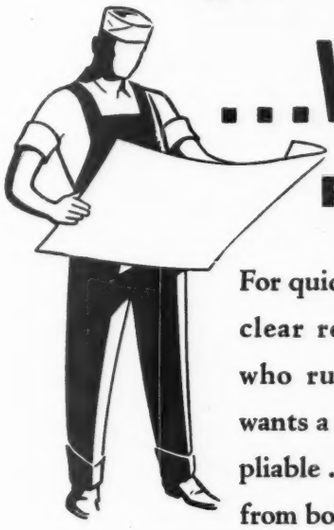
2214 NORTH WAYNE AVENUE, CHICAGO 14, ILLINOIS

WHAT PRESS FOREMEN DEMAND



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For quick starting; for sure, clear register — the man who runs the pressroom wants a blanket that will be pliable . . . resilient . . . free from bolstering . . . uniform in thickness . . . ink-repellent at its surface . . . non-stretching . . . resistant to surface abrasion. VULCAN PRESS BLANKETS have all these qualities* Continued research by our engineers is your assurance that these qualities will remain — until further *improved* upon when changed conditions permit.

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WPB News

General Chemical Order Amended —Glue and Copper Chemicals Affected

THE War Production Board on September 12 amended M-300, General Chemicals Order, increasing the small order exemption for glue, and adding copper chemicals to the control of Order M-300. At the same time M-227 (copper chemicals) order was revoked.

The small order exemption for glues is now 10,000 lbs. of hide and extracted bone glue and an additional 10,000 lbs. of green bone glue per quarter.

WPB officials explained that while the relaxation of the small order exemption reflects an improved supply of glue, controls will be maintained to guard against possible contingencies affecting imports of bones from Argentina and other parts of the world.

Suppliers are now required to file Form WPB-2947 for allocations of glue, and customers are to furnish suppliers with certified statements of proposed use for all orders in excess of small order exemption limits. Formerly suppliers submitted Form WPB-2946, and customers submitted Form WPB-2945.

Glue is used in the production of such items as abrasives, adhesives, containers, cork products, gaskets, gummed paper, tape, matches, paper, paper products, printer rollers and textiles.

Allocation controls governing the production of copper chemicals remain substantially the same under M-300.

No change is involved in the allocation procedure for copper chemicals. Copper chemicals are needed for electroplating, gasoline purification, catalysts, antifouling paints and agricultural fungicides.

No Further Cuts in Book Publishers' Paper Expected

IT is not expected that there will be a further cut in book publisher's paper consumption quotas in 1944, members of the Book Publishing and Manufacturing Industry Advisory Committee were told recently by officials of WPB's Printing and Publishing Division. However, the demand for certain types of paper by the military services and the Foreign Economic Administration is so high that publishers will not be able to maintain inventories of the quantity presently permissible under the several paper-use limitation orders, WPB said. Therefore, members of the book industry advisory committee, in session at Washington, recommended a 15% curtailment of inventories, as of October 1, until such time as the shortage of printing paper is relieved.

Faced with a substantial shortage of groundwood, book and fine papers in the last quarter of this year, estimated at between 50,000 and 60,000 T., the members of the committee said their opinion was that book publishers would prefer to supplement their receipts of new paper by using paper already in inventory, rather than have WPB impose a further curtailment in consumption quotas.

Recent WPB Actions

CHEMICALS—Amendment to M-300 (8-3-44)—Places sodium ferrocyanide, potassium ferrocyanide, potassium ferricyanide and potassium-sodium ferricyanide chemicals used in the photographic and textile industries under allocation effective Sept. 1, 1944.

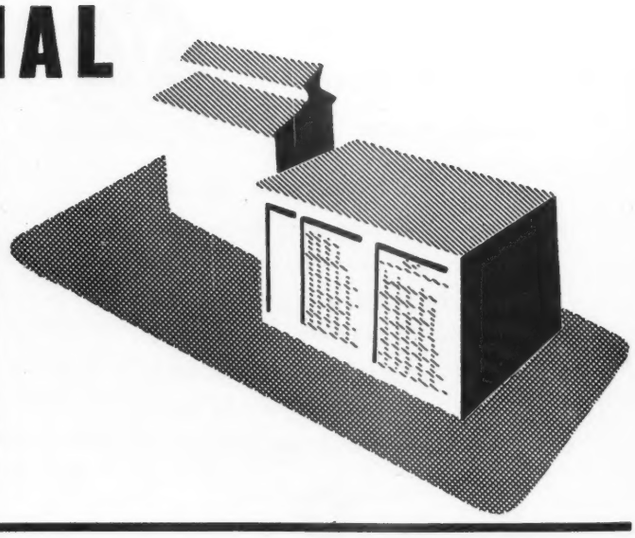
GOVERNMENTAL COMMERCIAL PRINTING AND DUPLICATING—Amendment to L-340 (8-21-44) relieves Governmental Bureaus from filing compliance certifications with commercial printers when purchasing paper and removes inventory restrictions.

GLYCERINE SUBSTITUTES—Amendment to Schedule 20 of M-300 (8-22-44)—Removes allocation controls from commercial grade noncrystalline sorbitol-isomeric mixtures, chiefly used as glycerine substitutes in the production of adhesives, pastes, glues, printers rollers and food products.

LIGHTING FIXTURES—Amended L-212 (8-16-44)—Removes restrictions on use of metals in utility type incandescent lighting fixtures and makes minor relaxations on other types of fixtures.

PAPER DELIVERY QUOTAS—Amendment to L-240 (8-10-44)—Provides

Hamilton Equipment is ESSENTIAL



Whatever kind of printing plant you operate, there is a requirement in it for Hamilton equipment. You may set type by hand or by machine, or you may buy all your composition "outside". Before type forms go to the press, necessary work must be done on them. This work is done best on Hamilton Type Cabinets and Hamilton Imposing Tables.

Handwork is expensive and should be done only under conditions that will promote efficiency. There is a Hamilton cabinet to fit every composing room need.

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HAMILTON MANUFACTURING COMPANY

ABLE TO DO THE JOB

Over 140 years we have helped printers' problems. We have helped in days when paper was poor and scarce, and when paper was fancy and plentiful. That is why Johnson Inks can help printers today.

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We Believe:

That any printer now using CROMWELL Special Prepared TYMPAN will agree that there is no finer tympan made.

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That dollar for dollar . . . no other tympan delivers more in long-run endurance, uniform precision or . . . more in profitable performance.

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That once you give CROMWELL Special Prepared TYMPAN a fair test . . . *you'll use no other kind.*

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CROMWELL TYMPAN FEATURES:
Hard, uniform surface
High tensile strength
Proof against oil and ink solvents.
Proof against moisture—temperature extremes

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CROMWELL SPECIAL PREPARED TYMPAN

that newspaper publishers may compute their paper delivery quotas on an average monthly basis.

SOLDER—Revised M-43 (8-23-44)—Permits use of solder having up to a 50 percent tin content by weight for three additional purposes.

SPROCKET CHAIN—Amended L-193-a (8-12-44)—Exercises greater control over deliveries of sprocket chain and attachment links.

TAG BOARD—Amended Schedule XVI of L-120 (8-2-44)—Places dealer tag boards made of rope, jute and special fibres under control.

Agree to 15% Inventory Curtailment

REPRESENTATIVE magazine and periodical publishers have agreed to accept a 15% curtailment of their printing paper inventories until the shortage of paper is relieved, War Production Board officials said on September 19. This decision was reached at a recent meeting of the Magazine and Periodical Industry Advisory Committee.

Confronted with a civilian shortage of groundwood, book and fine papers in the fourth quarter, estimated at between 50,000 and 60,000 tons, magazine publishers said they prefer to use paper out of their inventories to supplement their receipts of new paper rather than have their fourth quarter usage reduced.

Total inventory savings proposed through modifications of the three book, magazine and commercial printing orders are expected to approximate 60,000 T., of which the magazine publishers would contribute about a fourth. This should relieve pressure on the paper mills and leave that much more paper on the market, WPB officials said.

As soon as cessation of the war in Europe reduces nitration demands on pulp, and permits relaxation of WPB paper limitation orders, or as soon as pulpwood and paper production increases sufficiently to relieve the shortage, WPB officials agreed to restore the inventory cuts to publishers and permit the rebuilding of inventories to the presently permitted 60-days' supply.

The publishers also recommended that all WPB paper limitation orders be amended to require that each publisher and consumer of printing paper certify on each and every purchase order that the paper purchased will be consumed in accordance with the specific order under which he operates, whether it be the magazine, book or commercial printing order. It was the consensus of the meeting that such measures would ensure more effective compliance with all Printing and Publishing orders, and guarantee that printing paper does not get into the wrong channels.

Another recommendation discussed was heavyweight paper in publishers' inventories. Although WPB desires to release such paper, the committee decided that some very serious inequities would result, and, since such paper is in most cases part of the publisher's permitted inventory, there did not seem to be any fair way of releasing it from his inventory. Some committee members proposed that this matter be postponed until the next meeting on October 24 and 25.

When reconversion of industry starts, it is estimated that demands will absorb all the paper that the mills can supply. Paper limitation orders will have to be maintained after Germany is defeated, but it is planned to remove as many restrictions as possible, provided military requirements are met, officials said.

Two New Members for Advisory Committee

ON September 19, WPB announced the appointment of two new members to the Magazine and Periodical Industry Advisory Committee, Printing and Publishing Division. These are G. D. Boylan, Meredith Publishing Co., Des Moines, Ia., and Charles G. Sweet, of Capper Publications, Inc., Topeka, Kas.

Newsprint Supply for 4th Quarter Same as 3rd Quarter

ON September 20, WPB announced that the total newsprint supply for U. S. consumption in the fourth quarter of 1944 will be 819,000 T. This is the same quantity as allowed for the third quarter of 1944.

The fourth quarter newsprint supplies aggregating 819,000 T., will consist of monthly deliveries as follows:

Canada	200,000 T.
United States	60,000 T.
Newfoundland	13,000 T.

Although newsprint requirements for all United States consumers and Governmental and Army and Navy orders are estimated to be approximately 860,000 T. for the fourth quarter, no change in the sliding scale of reductions provided in Newspaper Limitation Order L-240 is contemplated for the fourth quarter of 1944, WPB said. Publishers will be permitted to consume their full fourth-quarter consumption quotas, but will be required to obtain paper from their inventories to meet the excess of consumption quotas over delivery quotas. However, no publisher may use more newsprint than his established fourth-quarter allowable use as set forth in L-240.

The amendments to L-240, which establish delivery quotas on the average of the last five months of this year, provide that tonnage permitted to be ordered each month will almost balance with the monthly available supply. The margin is so narrow that it may be necessary to introduce some restrictions on delivery quotas if monthly orders on newsprint mills exceed the amount they are able to supply, but such restrictions would not apply to consumption quotas, WPB pointed out.

Paper Shortage to Continue after V-in-E Day

THE general paper and paperboard shortage and high demands for paper will continue probably for 10 months after "Victory in Europe" Day, War Production Board officials told members of the Over-All Paper Industry Advisory Committee at its recent meeting. Pulpwood, pulp and paper inventories were reported low.

The Offset-Lithographer and "Dishpan Chemistry"

(Abstracted from address delivered by Kenneth M. Martin, Harold M. Pitman Co., before convention of National Association of Photo-Lithographers, New York, N. Y., September 1944)

RIGID methods of chemical control are difficult and expensive to apply on a small scale. Yet it is often even more expensive not to apply them. The lithographer is essentially a converter. He is interested in converting paper and ink into graphic material. Everything else he does is a means to that end. It just doesn't make sense that a lithographer should spend a lot of time on dishpan chemistry and we believe that sooner or later prepared solutions will predominate. The cost of these solutions will compare very favorably with the cost of the home made variety as soon as volume buying permits manufacturing economies.

Vibration Control Equipment

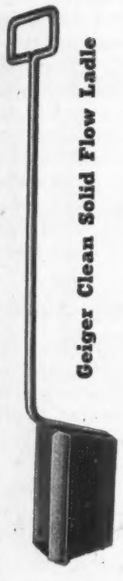
A 6 page illustrated bulletin has been published by Vibration Control Company in which are described devices and services afforded in controlling vibration in equipment. Vibration control units are described. A copy may be obtained from Vibration Control Co. direct, or through *Printing Equipment Engineer.*

Roller Bulletin

Ideal Roller & Mfg. Co. has published a 4 page bulletin in which are described two types of rollers. The Inkmaster (solidified oil) is intended as a distributor roller and the Synthox (synthetic rubber) for form rollers as well as distributors. On an illustrated page technical information is given for the regular daily washup of rollers, cautions against the things which should not be done, restoring tacky roller surface, and checking ends of rollers for long life.

Added to Technical Staff

Jack Watson was added to the technical staff of J. M. Huber, Inc. on September 1, it was announced by R. J. Cashion, vice president. As one of his extracurricular activities Mr. Watson is vice president of the New York Printing Ink Production Club.



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National Electrotype Co...New York, N. Y.
Country Life Press.....New York, N. Y.
Toronto Star, Ltd.....Toronto, Canada
The Wrigley Company.....Atlanta, Ga.
The Columbus Citizen.....Columbus, Ohio
State Journal.....Lincoln, Nebraska
Precision Electrotype Co. San Francisco, Cal.
Baker Democrat Herald.....Baker, Oregon
Everybody's Publishing Co...Buffalo, N. Y.
Sterling Daily Gazette.....Sterling, Ill.
The Sun Pub. Company.....Jackson, Tenn.
Heavin & Hannah.....Houston, Texas
Rapid City Democrat.....Rapid City, S. D.
Macon Chronicle Herald.....Macon, Mo.
Hillsdale Daily News.....Hillsdale, Mich.
Eau Claire Press Co.....Eau Claire, Wis.
Register Publishing Co.....Danville, Va.
Streater Daily Times-Press.....Streater, Ill.
The Patter Press.....Waltham, Mass.

And many others.

This ladle pours the metal from the bottom instead of the top through an 8″ sleeved port, eliminating any dross or porosity in halftones, line etchings or type. You will notice a large difference in the cleanliness and solidness of your flat casts, which means a cleaner print throughout.

Specify left or right-handed ladle when ordering.

Price $12.50
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ROTARY PRESS

Rotary Web Perfecting Press to deliver pages of telephone directory size 9 11/16 x 11 3/8″ untrimmed. Prefer a press that will print up to 72 or 144 pages, delivering signatures open on three sides. Wesel groove adjustable plate lockup preferred. Answer giving diameter and length of cylinders and other particulars. Also state lowest cash price. Box 216, *Printing Equipment Engineer.*

DIE-CUTTING PLANT SUPERINTENDENT for plant with large Miehle cutting and creasing equipment. Must understand all phases of die-cutting, including die-making. Greeting card die-cutting and embossing experience helpful. Cleveland, Ohio. Box No. 214, *Printing Equipment Engineer.*

MATERIALS HANDLING

This book by Harry E. Stocker is of vital interest to mechanical and production executives in printing and publishing plants.

While not written specifically as a treatise on materials handling in the printing plant, yet a great deal of its text will be of value in the handling of materials in the plant and outgoing shipments from the plant.

Bound in light buckram, 309 pages, many illustrations, size 6 in. by 9¼ in. Price $5.00 per copy, cash with order.

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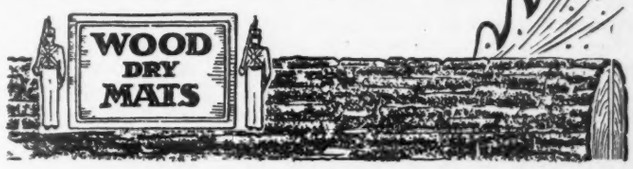


Future Offset Equipment

(Continued from Page 34)

all in this field. The common steel plate has given some very good results, but its tendency to rust makes special care necessary. A new alloy metal plate on a stainless steel base seems to be the answer to a lot of problems that have come up in the pressroom in the past. This plate when handled by the Coloron process is practically indestructible and has the stamina to stand up for long runs. The Coloron process is a form of oxidation put on the plate where the image is to be, and this oxidation takes ink perfectly and will last until the plate is worn out. Or, it can be removed electrolytically, if the plate is to be used again.

Outlook for Press Equipment

THREE very interesting papers were presented by representatives of offset-lith printing press manufacturers. These were delivered by Benj. L. Sites of Miehle Printing Press & Mfg. Co., Fred A. Hacker of American Type Founders, and by Harry A. Porter of Harris-Seybold-Potter Co. Summaries follow:

Fourth Printing Process

MR. SITES of Miehle Printing Press & Mfg. Co., said: "My remarks must necessarily be largely directed to what I can tell you about the plans of the company which I represent. I wish I could tell you that as soon as the war is over we will be able to offer you several new sizes of high speed offset presses for immediate delivery. This is impossible.

"In general, it is my guess that most manufacturers of printing machinery and equipment will first bring out the models which they were offering to the trade prior to the beginning of the war. Many of these models will be improved and refined in many respects.

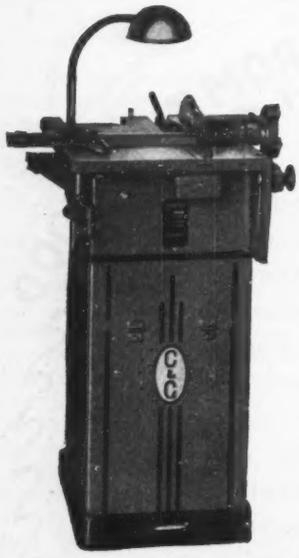
"Most manufacturers have made strenuous efforts to keep their customers' machinery in good repair during the war period, and if the large volume of post-war printing business predicted by many becomes a reality, we feel quite sure that the machinery now in the hands of printers will give a good account of itself until new models are ready for the market.

"Prior to the war, our company practically completed and constructed a new model of multicolor offset press. Because it was so nearly finished, the Government permitted us to complete it, and for the past two years it has been under test in our factory. This press contains many new mechanical features.

"You may rest assured all of the machinery manufacturers have learned much about new manufacturing processes through their war efforts, and that knowledge will eventually pass on to the printer through the use of our products. It takes time to apply all we have learned to our respective businesses, but it will result in more productive and higher quality in all types of machinery and equipment. We as manufacturers consider this a *must* because printers, like all other manufacturers, will be faced with high labor costs and high taxes for some time to come. However, for the time being, we must ask you to be patient.

"Aside from the purely mechanical improvements in printing machinery, there is something else that should receive the consideration of printers in general. Printing presses require printing processes. Thus there are typographic, lithographic and gravure presses, depending upon which of the three major processes is involved. The fact that each process continues to maintain for itself, recognition in its own field indicates that each one has certain distinct advantages over the others.

"This gives rise to the thought that the possibility exists of creating a fourth method of printing which would tend to combine some of the good features of each of the other processes, and this resulting method would then assume a normal place alongside the others. It is believed that such a method exists. It is called Intaprint. Fundamentally it is a gravure method, utilizing the good features which gravure has to offer, that of capabilities for depositing heavy weights of color, simplicity of press design, having no roller or fountain settings; but without the disadvantage of carbon tissue. It draws from the offset field in that it utilizes a one piece plate which is photo-composed, thus eliminating most of the lock-up time. The plate is strapped



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around a cylinder and contacts a rubber blanketed impression cylinder, which eliminates hours of make-ready time. From typography, the splendid reproduction facilities of the halftone screen are utilized in the making of the plates, which can be tooled and worked on in a manner similar to photoengravings. Thus it is believed that in the future, not only presses will be better but also the field of printing processes will be broadened."

Defines "Reconditioned" and "Factory Rebuilt" Equipment

FRED A. HACKER, Manager, Product Research and Development, American Type Founders, defined the terms "Changes," "Improvements" and "Radical Developments" as applied to offset-lithographic equipment during the postwar period when manufacturers again will have equipment available. He said that during the past year equipment manufacturers have stated, on several occasions, that there will be no "radical developments" in machinery immediately following V-Day. That is still true, at least as far as my company is concerned. Manufacturers of Offset Equipment have been too busy filling war orders to give much attention to radical developments. Some changes, however, and; perhaps a few improvements in equipment, may have taken place, made possible through government requirements. At this point permit me to clarify the difference between "changes", "improvements" and "radical developments."

(a) A "change" might be the moving of an electric motor from the outside of the frame to the inside—to conserve floor space; cutting down the base, to make the press lower, so that it will fit into a mobile unit, or changing the print size to fit a particular requirement. A change is made upon customer specifications in a comparatively short time, and usually at the expense of the customer.

(b) An "improvement" on the other hand, may be accomplished by obtaining greater press production, or by using an improved material to increase the life and efficiency, possibly of the blanket, rollers, or dampers; or by increasing the dependability of the water mechanism, and other similar improvements which can be made without "drastic redesign."

(c) A "radical development", on the other hand, may be a complete redesign or a wholly new conception influenced by the discovery of new materials, a change in industrial procedure, changes in fabrication technique, a release from the idea that conventional forms are always best, or a desire on the part of a customer to produce an effect or result not obtainable with equipment at hand.

A "radical development" occurs infrequently. The conception may occur to the inventor or engineer in an instant, but the development of the idea may require the full time of a group of engineers and the facilities and financial resources of a large organization over a period of months, and possibly years. A complete re-tooling job may be necessary.

Equipment Improvements—During the war the government purchased considerable Offset Equipment. This made it possible for the manufacturer to make some improvements in equipment as he went along, such as

(a) Greater accessibility of controls, levers, adjustments and operating mechanisms.

(b) More simplified roller setting mechanism.

(c) Some refinements in feeder and delivery mechanisms.

(d) Greater feeder and delivery capacity.

(e) Better methods of lubrication and other similar improvements.

Purchasing Used Equipment

New equipment, purchased during the several years prior to and during the war, will definitely not be obsolete on V-Day. Because of the unprecedented demand, however, for offset printing during the war years, and the scarcity of

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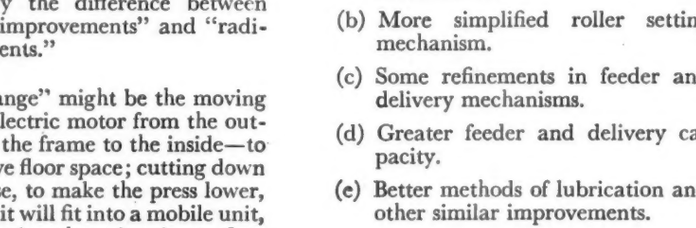

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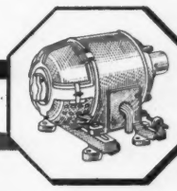

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equipment, it has become necessary for printers to keep their presses running through several shifts. Some replacement may, therefore, be necessary unless you have a definite maintenance and repair program set-up in your plant and have thus kept your equipment in good running order.

Avoid Worn Out or Obsolete Equipment—If your budget does not permit the purchase of new equipment, then be sure to check with the manufacturer of the used machine before purchasing. As far as possible, check its complete history, serial number, age, last owner, and why it was sold. Try to have an offset specialist or service man look at the equipment and give you his opinion.

And don't forget the difference between "reconditioned" and "rebuilt" equipment. "Reconditioned" means a coat of paint, polishing the ends of shafts, adding a few red knobs, polishing the brass, perhaps changing the blanket and rollers.

A "Factory Rebuilt" machine, however, is guaranteed by the manufacturer. Such a machine has been completely taken down and overhauled, bearings checked and replaced, cylinders checked for dents—filled in where necessary and reground—the entire machine brought up to date, as far as practicable—with improvements made in that model during the past years.

How about used cameras? When an operator dumps a camera he is pretty certain that it is completely shot. An up to date usable camera seldom leaves the offset plant. The used camera you find in second-hand dealers' warehouse is usually a "gilopy", ready to fall apart, difficult if not impossible to rebuild. Such a camera will give your operator plenty of headaches, will slow up production, and increase the already high operating cost of the dark room.

This goes also for rusty, worn out plate-making equipment—camouflaged with a coat of paint.

Personnel—Have you given any thought to the personnel that will operate your equipment after the war? This is a real responsibility.

Your first thought should naturally be to provide a job for a veteran. But do not be of the opinion that it will be as easy as that. Your former employee may not return. We sincerely hope he will—but will he be satisfied with his former job? I doubt it. We must admit that the returned veteran deserves upgrading.

Your former pressman may have broadened his experience—he may want a job as foreman.

Your camera operator may have gained a wider experience and, perhaps,

(*Continued on Page 56*)

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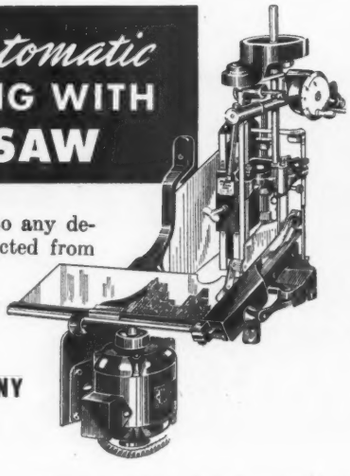

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These Firms are Represented in the Current (1944) P-Double-E Where-To-Buy Reference Issue

Abrams, The M. L. Co. 60
Remanufactured printing equipment

Acme Press Blanket Co. 109
Printing press blankets

American Publishers Supply 108
Stereo perforated gummed packing felt

American Roller Co. 100
Synthetic rubber rollers

American Type Founders 25
Equipment for letter press and offset plants

Armstrong Machine Works 8
Armstrong humidifying units

Atlantic Zinc Works 87
Zinc plate stock for photo-engravers

Automatic Saw Sharpening Co. 103
Saws and saw sharpening; Dixon's mold polish

Beveridge Paper Co., The 101
Stereotype mats

Blatchford, E. W. Co. 24
Type metals and Blatchford "Honeycomb" base

Booth, The E. A., Rubber Co. 49
Zink cut cement; rubber rolls for line-composing machine keyboards

Brandtjen & Kluge, Inc. 46-47
Automatic die-cutting and open platen presses; automatic platen press feeder

Burgess Cellulose Co. 18
Stereotype mats

Certified Dry Mat Corp. 16
Stereotype mats

Challenge Machinery Co., The 101
Labor-saving iron furniture

Champlain Div., Fred Goat Co. 19
Rotogravure, aniline and typographic presses

Chandler & Price Co., The 4
Printing presses and paper cutters

Cline Electric Mfg. Co. 20-89
Electrical control and drive equipment for all types of presses, paper and plate conveyors, typesetting machine drives

Cottrell, C. B. & Sons Co. 26-27-28
Rotary printing presses and platemaking equipment

Cromwell Paper Co., The 107
Tympan paper

Dexter Folder Co. 10
Feeding, folding, gathering and stitching machines; trimmers and bronzers; punches, perforators, drills

Douthitt Corp., The 97
Photo-engravers' and lithographers' plate whirler

Duplex Printing Press Co., The 40-41
Newspaper printing presses

Eastern Newspaper Supply 43
Stereo supplies

Edes Mfg. Co., The 98
Photo-engraving zinc and copper; Edes' weight chart

Elwell-Parker Electric Co. 91
Power industrial trucks, mobile cranes

Federated Metals Div., American Smelting & Refining Co. 55
Type metals, special alloys, copper anodes, dross recovery, adjusting alloy

Force, Wm. A. & Co. 93
Numbering machines and marking equipment

General Electric Co. 30-31
Motors, press controls, electric heating equipment for melting type metal, photo-electric register control equipment, safety equipment for gravure plants

Goodyear Tire & Rubber Co., The 3
Press blankets and packing

Goss Printing Press Co., The 88
Newspaper printing presses

Hamilton Mfg. Co. 50-51
Wood type, cabinets and tables; page storage cabinet

Hammond Machinery Builders, Inc. 29
Saw-trimmers, routers and stereo casting equipment

Harris-Seybold-Potter Co. 21-22-23
Offset, letterpress and gravure presses. Cutters, stitchers, drills and bookbinding equipment

Herrick, William C., Ink Co., Inc. 104
News inks, commercial letterpress inks, special inks, color book

Hess and Barker 42
Rotary plate shaver; four-color letterpress printing press

Hoe, R. & Co. 80-81
Newspaper, rotogravure, magazine and offset printing presses and stereo platemaking equipment; press reels, tensions and pasters

Huber, J. M., Inc. 45
Newspaper, gravure, letterpress and offset inks

Huebner Laboratories 95
Reproduction equipment and processes for Graphic Arts

Ideal Roller & Mfg. Co. 53
Printing press rollers

Imperial Type Metal Co. 12-56
Type metal, metal remelting equipment and photo-engravers' zinc

International Printing Ink, Div. Interchemical Corp. 17
Inks for every Graphic Arts purpose

Intertype Corporation ..... Outside Back Cover
Line-composing machinery and accessories

Johnson, Chas. Eneu & Co. 85
Printing inks for every purpose

Justrite Mfg. Co. 109
Justrite safety cans

Kelly, E. J., Co. 109
Printing ink manufacturer advertises bulletin: "Ten Ways To Avoid Offset"

Kimble Electric Div., Miehle Printing Press & Mfg. Co. 107
Custom-built motors for printing machinery

Lake Erie Engineering Corp. 11
Direct pressure platemaking presses for molding stereo, plastic and rubber plates

Lanston Monotype Machine Co. 15
Typesetting and type casting machines

Linotype Parts Co. 44
Parts for Linotypes and Intertypes. Electric motors

Ludlow Typograph Co. 6
Composing machines and equipment

Matrix Contrast Corp. 62
Matrix contrast system for line-composing matrices

Mergenthaler Linotype Co. 77
Line-composing machinery and accessories

Miehle Printing Press & Mfg. Co. 1
Printing presses

Miller Printing Machinery Co. 5
Letterpress presses

Milwaukee Saw Trimmer Corp. 58
Saw-trimmers, router and type high machines, jig saws and waste receptacles

Mohr Lino-Saw Co. 105
Slug trimming saw for line-composing machines

Monomelt Co. 107
Metal melting device for line-composing machine metal pots and precision plate shaver

Montgomery and Co. 109
Parts and accessories for line-composing machines

Morley Co., The 103
Stereotype mats

Morrill, Geo. H. Co., Div. General Printing Ink Corp. 59
News, job and specialty printing inks

Mount Vernon Presses 105
"Jeep" offset printing press

New England Newspaper Supply Co. 36
Newspaper stereotype and pressroom supplies

Nolan Machinery Corp. ..... Inside Front Cover
Saws, proof presses and stereo platemaking equipment

Norma-Hoffman Bearings Corp. 39
Ball and roller bearings

Ohio Knife Co. 108
Paper trimmer knives

Plastic Binding Corp. 38
Plastic binding

Printing Machinery Co., The 57
Sterling toggle hook and semi-steel base system

Rapid Roller Co. 83
Printers' rollers and offset press blankets

Richards, J. A., Co. 109
Saws, routers, dies

Robertson, R. R. 102
Equipment for photo-engraving, lithography, rotogravure and commercial photography

Rouse, H. B. & Co. 61
Band saws, mitering machines, slug cutters, composing sticks and other accessories

Rutherford Mach. Co., Div. General Printing Ink Corp. 37
Offset platemaking and printing machinery; special machines

Simonds Worden White Co., The 196
Paper trimming knives

Sinclair and Valentine Co. 108
Printing inks for every purpose

SKF Industries, Inc. 52
Ball and roller bearings

Southworth Machine Co. 108
Paper conditioning machines, joggers, hangers, humidifiers, punching and perforating machinery; special machines built to order.

Sta-Hi Corp. 7
Stereo master formers

Standard Process Corp. 95
Thermo-plastic ("hot melt") paper coating machine

Stereotex Machinery Co. 105
Stereotex accessory equipment for plastic electrotype molds

Teletypesetter Corp. 99
Automatic line-composing machine composition

Tesch Mfg. Co. 105
Saw filer and swager

Timken Roller Bearing Co., The 34
Tapered roller bearings

Tingue, Brown and Co. 35
Printing press blankets

United American Metals Corp'n. 79
Type metals, metal feeders and metal remelting equipment

Universal Mono-Tabular Corp. 106
Vertical rule broach and supplies for all broach equipment

Vandercook & Sons ..... Inside Back Cover
Proof presses

Vulcan Proofing Co. 14
Newspaper and job printing press blankets

Wesel Mfg. Co. 32
Wesel final plate mounting system

Wetter Numbering Machine Co. 48-96
Numbering machines for all purposes

Wood Flong Corp. 33
Stereotype mats

Wood Newspaper Machinery Corp. 13
Autoplate stereo platemaking equipment

Young Engineering Co. 110
Printing presses and processing machines for special purposes

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Future Offset Equipment

(Continued from Page 53)

a commission. He may have other plans regarding his postwar job.

Your former salesman, perhaps now a lieutenant in the navy, may have ambitions to get into an advertising agency as an account executive.

Upgrade and train your present help so that they can in turn train the new help as it becomes necessary to expand. Train your key supervisory help to greater responsibilities so that it will be easier for you to cope with personnel problems as they arise.

Obsolescent and Used Offset-Lith Machinery Situation

HARRY A. PORTER, Harris-Seybold-Potter Co., discussed a number of factors entering into the printing press equipment situation during the postwar period. He said there will be two postwar periods, which he explained as follows:

Two postwar periods—It is obvious that the years after the war is won will be divided into two periods—first, the immediate post-war period and second, the long-range period. The immediate post-war demand for lithographic equipment and for bindery equipment will be heavy. In many lines the early post-war markets will be supplied by pre-war products for the simple reason that manufacturers will not have the time to bring out new products. Only those new developments proven by a wartime experience to be applicable to a peacetime economy, will be of sufficient value to have real acceptance by the Graphic Arts.

Prices—Prices for new Graphic Arts machinery will be higher in the post-war period—this must be taken for granted.

Surplus Government-owned Equipment—There has been considerable discussion with reference to Government purchases of Graphic Arts equipment during the war, and its disposal at the end of the war. This equipment should present no real hazard to our industry. In the past three-year period our shipments to the Government have amounted to only about a normal six months' business. Many of the machines which the Government has purchased have been designed especially for their particular application and a great many of them have been shipped overseas—probably never to return.

Obsolescence — Customers with late model presses and other equipment need have no fear that their machinery will become immediately obsolete after the war is over. The same equipment that has done an outstanding wartime job will still have years of profitable life. We say frankly, however, that improvements will be forthcoming later on.

Obsolescence of older equipment will probably enter into the picture of the future more than it ever did before. Many machines now in use have seen exceptional service and have crowded much more than normal life into the war years. It is problematical whether manufacturers will be able to take in old equipment that has had too hard use. It seems obvious that the value of used equipment available for trade-in will be materially lessened in every respect when the war is won.

Used Machinery—As a post-war measure, we have recently established a Used Machinery Division, to help us solve some of the problems incident to traded-in machines. A market for used equipment will always be with us. We believe that as manufacturers of new machinery, we have an obligation to the Graphic Arts industry to exercise a measure of reasonable control over that market.

The probability is that machinery manufacturers will not have extensive facilities available to take in or recondition old equipment for some years after the war. The demand for new equipment will in all probability, make it necessary for them to utilize virtually all of their capacity and personnel for the purposes of supplying new machinery markets, for a considerable time.

New Models—Because of some highly advertised and popularized wartime developments, people will have a tendency to expect entirely new products in the immediate post-war period. There will be a failure to recognize the complications incident to radical development. New models of Graphic Arts machinery will not, for the most part, be available immediately after the war is over. New equipment in the long-range period will come the hard way—as all worth-while achievements have come in the past.

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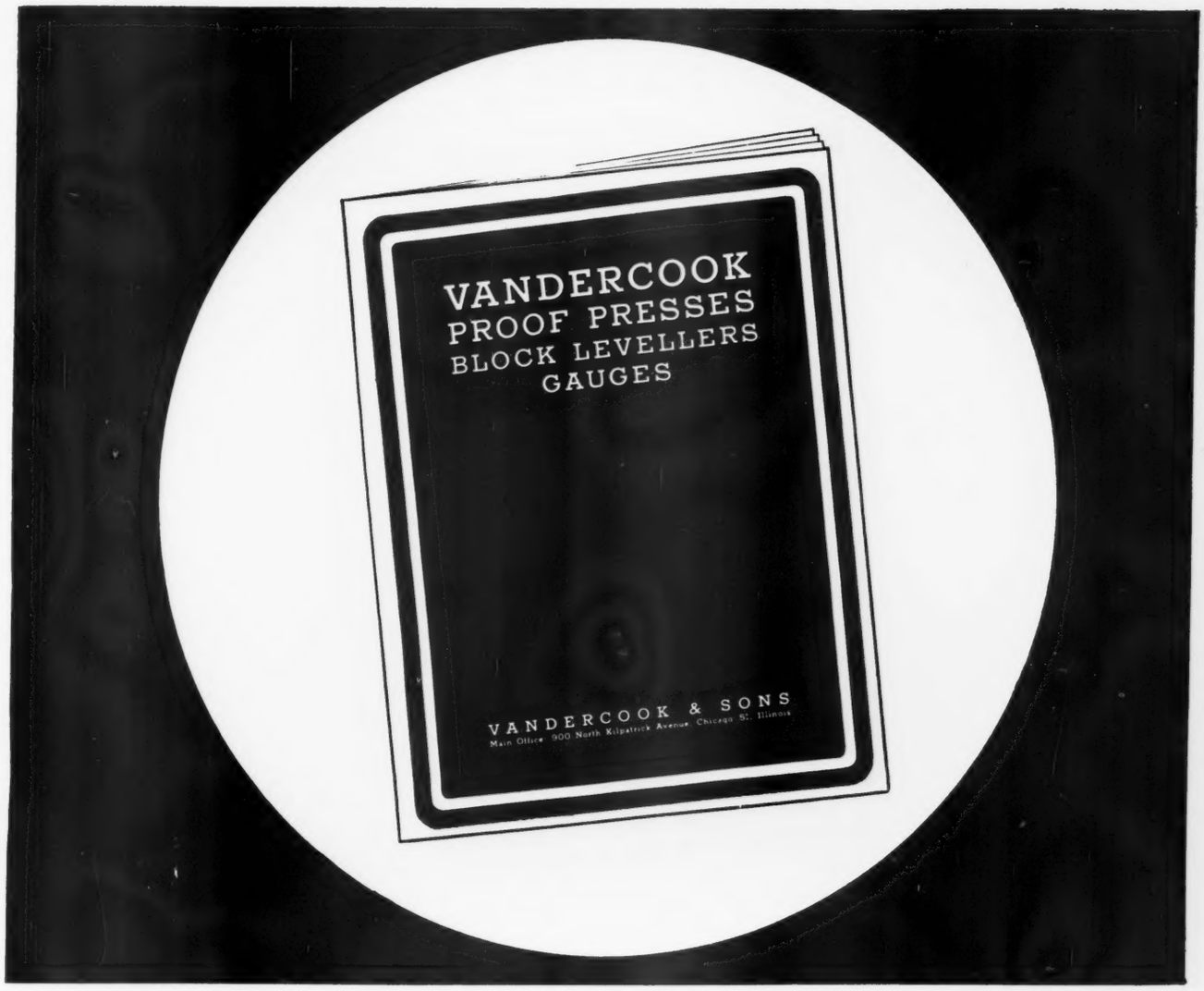

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Guarding Tomorrow's Freedom

How to forge a lasting peace...how to maintain full employment...how to prevent depression. Problems such as these loom already on America's horizons. Tomorrow they will suddenly blaze into issues that must be solved by the factions and interests that make up our democracy. Each of these factions and interests will demand to be heard—and they *will* be heard. ★ The press of America will report and comment on what each and every party to an issue has to say. The public will *know* what is going on. ★ It is thus that the best interests of America as a whole can be served over and above the interests of any one faction or any limited-interest group. ★ But this vital function can be performed *only* by a press completely free. When the war is won, the one present limitation on America's press freedom—military security—will no longer pertain. And no other limitation must ever be allowed to prevail. Not if the press of America is in a very real sense to remain the guardian of its future.

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Twenty-seventh of a series of messages on the Freedom of the Press by INTERTYPE, *Brooklyn*